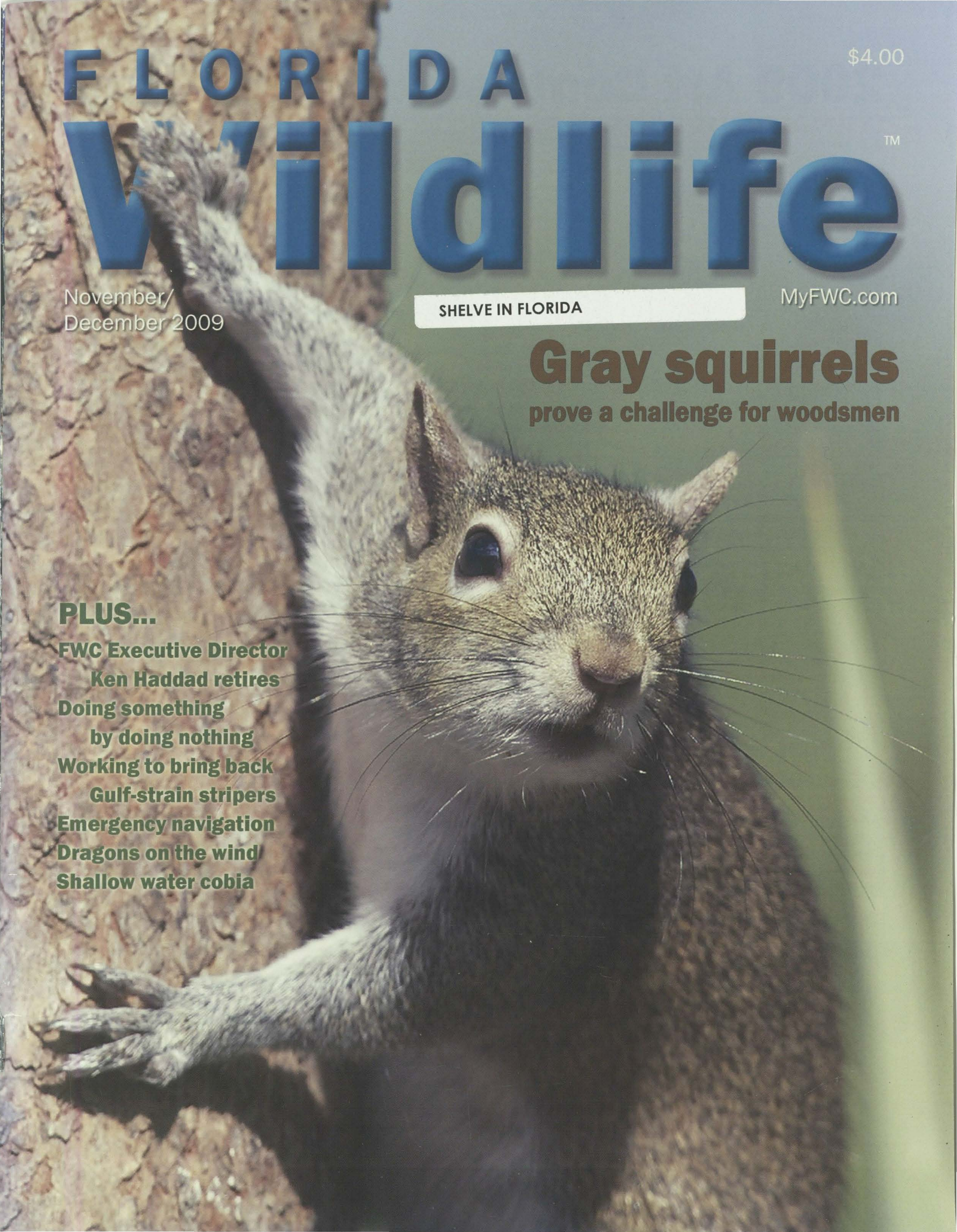

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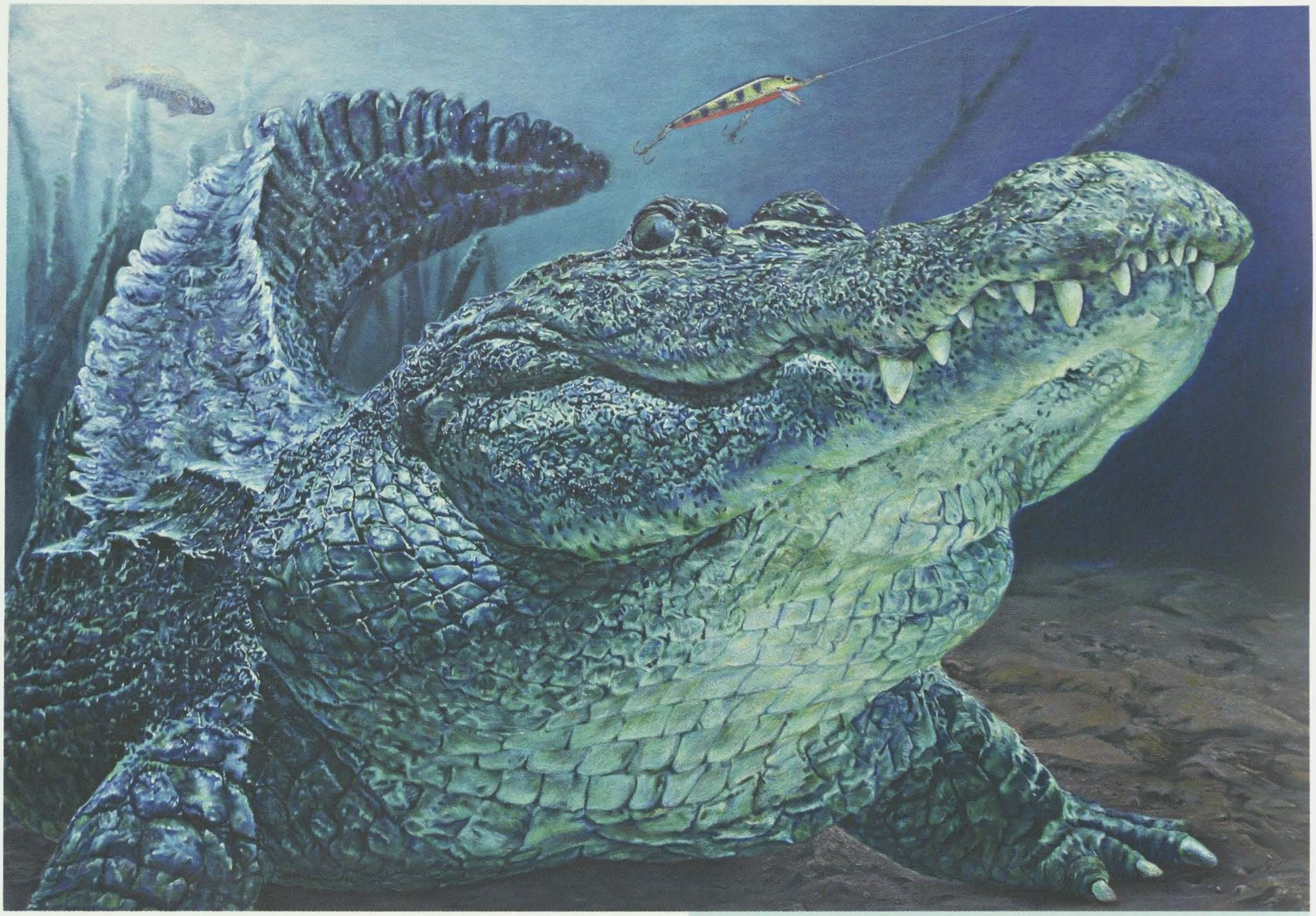
2009 Art Contest Winning Print



Here is your opportunity to own a copy of this year's *Florida Wildlife* art contest winning artwork. "Breaking Up The Monotony" by wildlife artist Leslie Evans is being reproduced as a limited-edition print, signed and numbered by the artist. Proceeds go to the Wildlife Foundation of Florida, a not-for-profit, non-political organization dedicated to preserving Florida's fish and wildlife for future generations.

Each print is $60 and may be ordered by calling toll-free 1-866-967-5600 or visiting www.wildlifefoundation.net.

2010 Art Contest

Florida Wildlife is pleased to announce its 2010 art contest. Winning entries will be published in the July/August 2010 issue and posted on the magazine's Web site. Signed and numbered limited-edition prints of the first place winning artwork will be available to *Florida Wildlife* readers. An entry form and a complete list of rules can be found on the magazine's Web site: www.floridawildlifemagazine.com.

- Contest is open to all artists at least 18 years old, regardless of residency.
- Participants may submit up to three entries.
- All entries must portray fish or wildlife native to Florida.
- Entries must be unframed artwork submitted as a 35mm slide, 4" x 5" transparency or high-resolution digital scan on CD (300 dpi and no smaller than 8.5" x 11")
- Entries must be labeled with artist's name.
- Entries must include a completed and signed entry form, available from www.floridawildlifemagazine.com.
- E-mail entries will not be accepted.
- Entries must be received by Monday, March 1, 2010. They will be returned beginning in July. Notification of contest results will be mailed to all participants.

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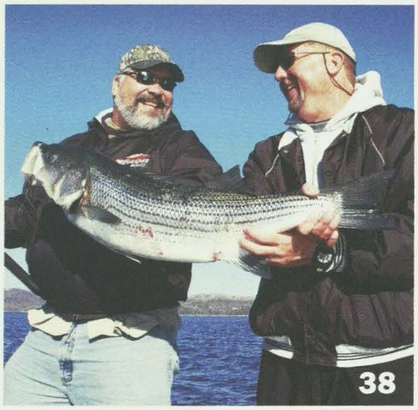
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JOHN N. FELSHER

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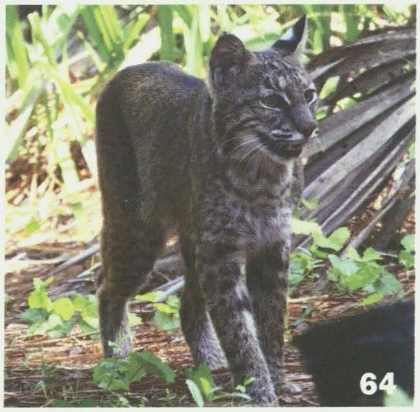
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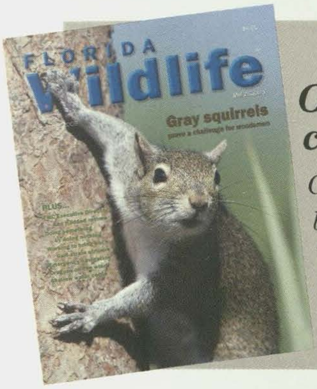

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Volume 62 **FLORIDA Wildlife** Issue 6

CELEBRATING OUR HERITAGE OF HUNTING, FISHING AND NATURE-BASED RECREATION

Published by the Florida Fish and Wildlife Conservation Commission
Our mission: Managing fish and wildlife resources for their long-term well-being and the benefit of people.

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Wildlife Foundation of Florida
ESTABLISHED | 1994

Charles "Charlie" Stroh Fund for the Restoration of Davis Reef

From the moment Charlie Stroh stepped foot in the Keys in the early 90s, he fell instantly in love. So much so that he purchased an ocean-side condo as his home away from home within the first week of his first visit. For years his family vacationed in the Keys enjoying the beautiful scenery, water sports, restaurants, and local residents. Mr. Stroh had always loved the water - his passion had always been sailing, but his new love became deep sea fishing - and his favorite place to enjoy it was Davis Reef.

On September 23, 2006, Charlie Stroh passed away in his home which he referred to as "Paradise". Unfortunately he was chosen for heaven before he could see his hopes for restoration come through. It is with great honor that the Wildlife Foundation of Florida has the opportunity to help his family carry out his last wish.

It is well known that the quality coral reefs, especially the shallow bank reefs such as Davis Reef, have declined in recent years. Coral cover especially has dropped considerably. The Restoration Ecology team at the Florida Fish and Wildlife Conservation Commission proposes to address and hopefully reverse this trend at Davis Reef by working in partnership with local citizens to place nursery reared corals at several locations at Davis Reef. Our vision is that this effort will be a sustained multi-year effort of coral outplanting paired with a program of rigorous science. This project has the potential to jumpstart coral recovery at Davis Reef. The significance, however, reaches far beyond Davis Reef itself. Because coral reef restoration is in its infancy, the scientific information developed here will lead to restoration designs that can be used across the entire Florida Keys in the future.

The Wildlife Foundation of Florida is raising $100,000.00 to initiate and sustain this initiative for 3 years. The first coral outplanting is scheduled for Fall of 2009 with additional outplantings planned for the future years. Coral maintenance and data collections trips will occur year-round. Our vision is that your contribution will serve as the seed for future successful competitive granting opportunities that will allow us sustain this initiative for the long-term and truly make a difference in coral reef restoration.

To help Mr. Stroh's dreams of restoration come true, please consider sending a tax deductible donation marked "Charles Stroh Fund" to:

Wildlife Foundation of Florida
P.O. Box 11010
Tallahassee, FL 32302

Or donate online at www.wildlifeflorida.org. Call 1-800-988-4889 for further information.

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A not-for-profit organization established by the state legislature in 1994, the Foundation is a funding organization that supports the statewide wildlife initiatives of the Florida Fish and Wildlife Conservation Commission and the programs of other Florida wildlife preservation advocates. The Foundation directs proceeds to vital and varied projects related to the management and conservation of Florida's wildlife and habitat.

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Director's **Message**

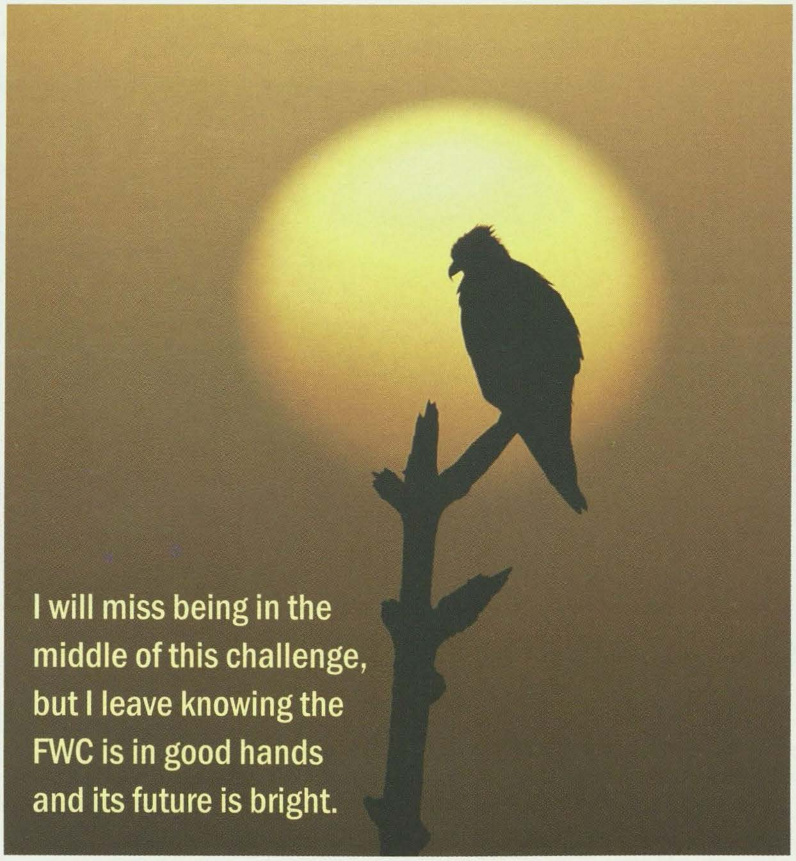
This is my last Director's Message

Kenneth D. Haddad

Executive Director
Florida Fish
and Wildlife
Conservation
Commission

It was with mixed feelings that I announced I would be retiring at the end of 2009. This will be my last Director's Message for this wonderful magazine. I haven't spoken much about the magazine itself, because it speaks for itself, but I do want to encourage all of you to actively help us with subscriptions. We need more readers, and I just know that once someone has seen it, they will want to subscribe. So pass along a copy to a friend, give a great present to friends and family, and spread the word.

Also, remember the important work the Wildlife Foundation of Florida does to fill gaps in our needs to protect and manage our precious fish and wildlife resources. It has provided millions of dollars to fund research and management of everything from bears to fish hatcheries. You can even make donations on behalf of friends, get a tax deduction, and they will receive a *Florida Wildlife* Magazine subscription. Think Christmas!



I will miss being in the middle of this challenge, but I leave knowing the FWC is in good hands and its future is bright.

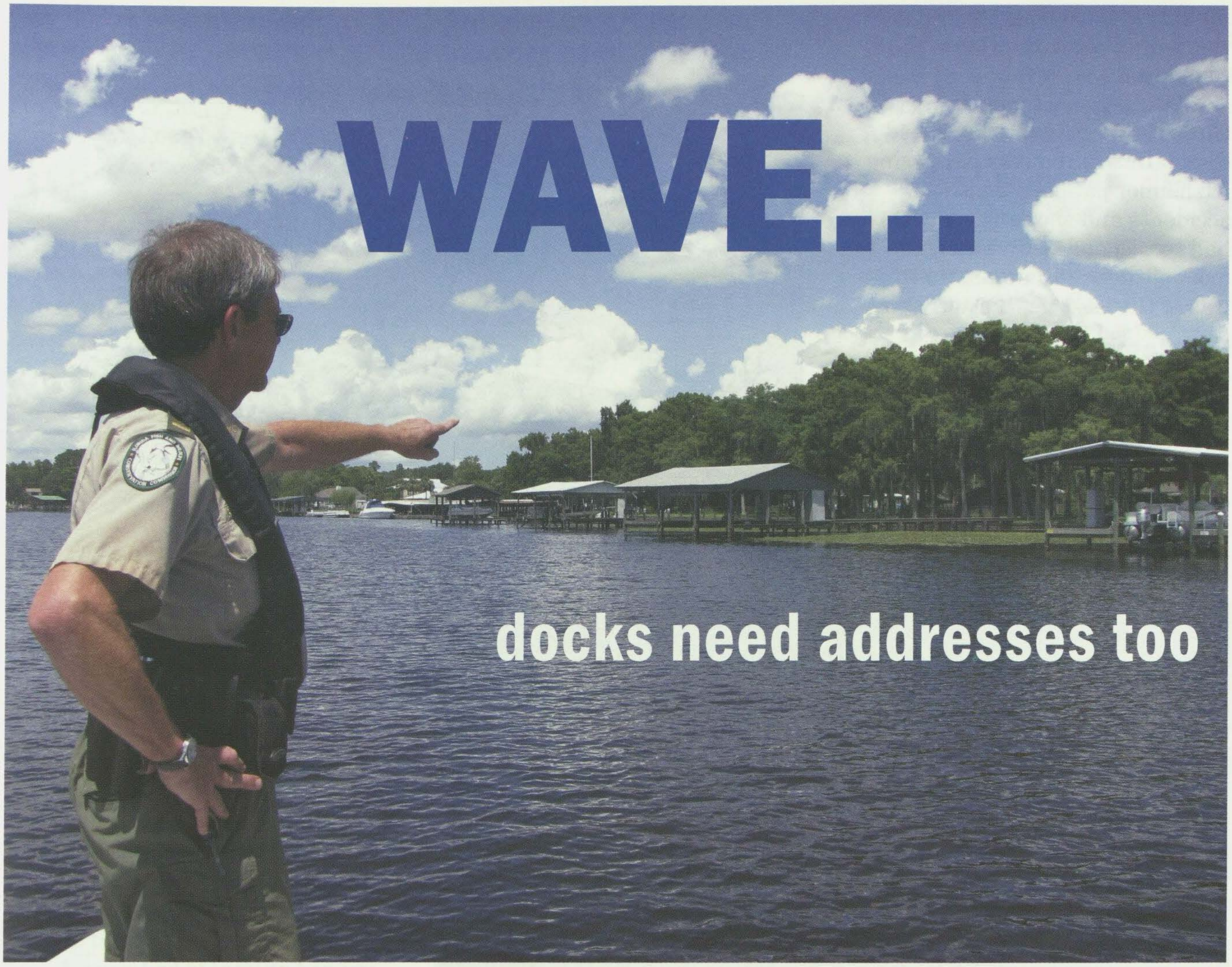
JACK ROGERS

I have to mention the FWC staff. They are the most dedicated, impassioned and least-appreciated group I know. Our biologists provide us with critical and trusted information for making the best management decisions for the resources; our administrative folks provide all the support necessary to run an operation that is more than 2,000 employees strong; and our law enforcement officers tirelessly work with the public to ensure our rules and regulations are enforced. They are highly educated, trained and skilled workers who are at the very low end of the pay scale nationally when compared with their counterparts. They are here because they love what they do, and I just don't know if the next generation is willing to make the sacrifices we've seen in the baby boomer generation, now leaving the workforce in large numbers.

Please don't forget about our Commissioners. They are appointed and receive no compensation for the hard work and difficult decisions made on behalf of the state's natural resources and the public. They take undue criticism and often face no-win solutions in solving fish and wildlife issues that face us.

And finally, in my 32.5 years of service and more than 50 years of living in Florida, I can, with conviction, tell you that your fish and wildlife resources have never been in better hands. In spite of unparalleled growth and loss of habitat, we have consistently improved the status of endangered and threatened species, we have increased the amount of habitat under state or local management by millions of acres, and the general public supports the protection and management of fish and wildlife in Florida. We have a tough row to hoe, but be assured that after 10 years of maturing, the Florida Fish and Wildlife Conservation Commission is completely capable of providing the leadership needed to sustain our natural resources in this 21st century.

I will miss being in the middle of this challenge, but I leave knowing the FWC is in good hands, and its future is bright. FW



WAVE...

docks need addresses too

Article and photographs by Bob Lee

Lt. George Pottorf checks out some of the docks in Georgetown, on the St. Johns River. Pottorf believes more dockside addresses equals better response times from FWC law enforcement officers who respond to emergency calls.

The morning after 5-year-old Haleigh Cummings disappeared, tips and calls from concerned residents poured into the Putnam County Sheriff's Office dispatch center. Law enforcement officers searched the woods and waters around the Satsuma neighborhood where Haleigh was last seen, trying to follow-up on every tip.

It was a cold February morning and every moment counted. This was particularly important for officers searching the nearby St. Johns River, where water temperatures had plummeted to an icebox-cold 55 degrees.

Lt. George Pottorf of the Florida Fish and Wildlife Conservation Commission led the waterborne search. He and his officers were assigned to follow-up on reports of things floating in the water. But as they tried to respond by boat to the addresses callers gave dispatch, their efforts were hampered by the fact that the docks didn't have addresses on them.

"We were shotgunned with complaints," Pottorf said. "But we had no way to sort out one dock from another. Dock owners didn't have their addresses tacked to the end of their docks, making it hard for us to match the right dock to the right complaint.

"And it wasn't just the Cumming's incident. We've had complaints in the past of missing Alzheimer patients, boating accidents and shootings that we had to respond to by water. In most of these situations, time was of the essence," Pottorf said.

Problems of the past

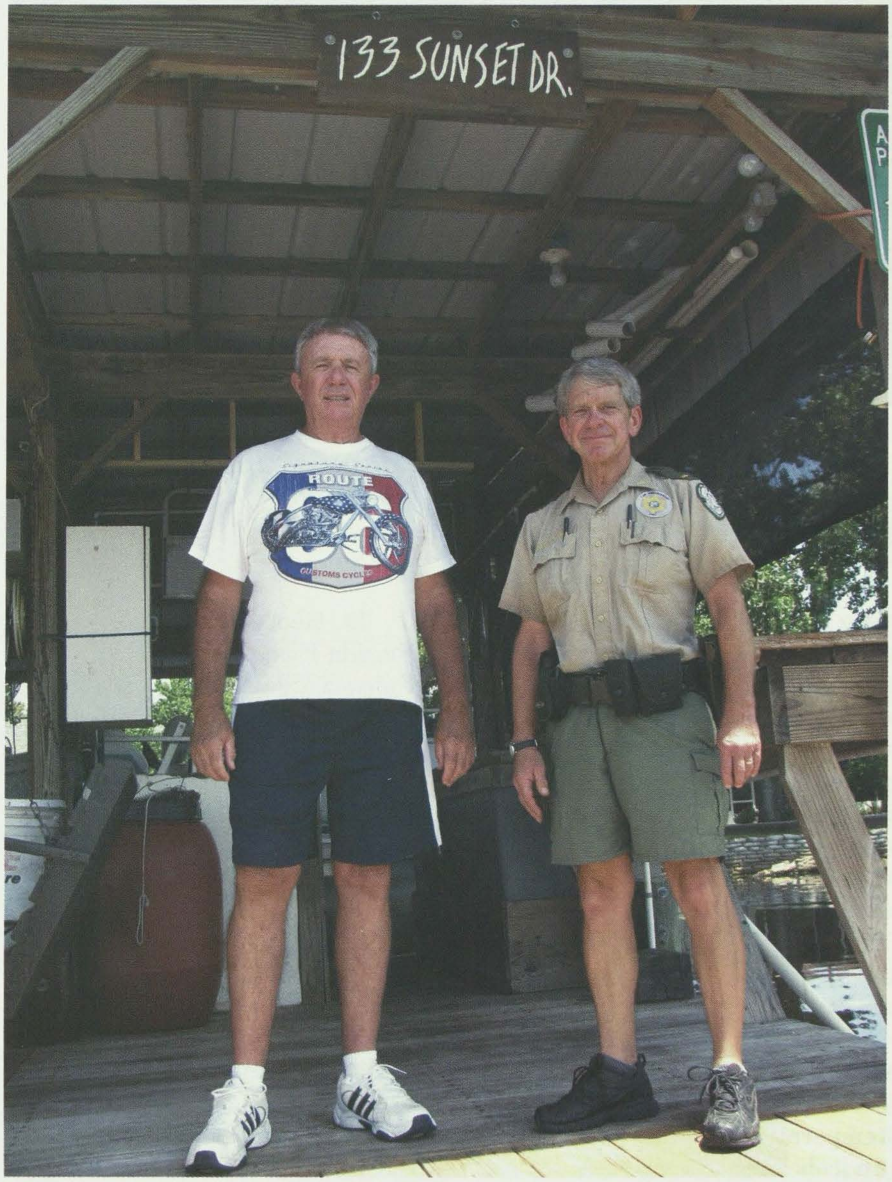
The lack of dockside 911 addresses has been a problem for FWC officers for many years. The issue was being able to distinguish one particular dock from the hundreds of other docks similarly built along any given stretch of shoreline.

Pottorf started to consider a solution seriously about a year ago when, on a couple of occasions, his officers had a hard time locating a manatee in distress.

"We would literally have to call the homeowner," said Pottorf. "And ask them to walk out on their dock and flag us down."

Not being able to find an injured animal is bad enough, but sometimes not having an accurate location can actually put an officer's life in danger.

"On one September night," said Pottorf. "We received a complaint from two men who were shrimping just north of Palatka on the river. They told us they'd been shot at by someone standing on a dock with a high powered rifle. The shrimpers were in a boat, so


133 SUNSET DR.

Left: Local fishing guide Don Weaver and Lt. George Pottorf stand beneath Weaver's new dock street address. Pottorf encourages shoreline residents to include the name of their street rather than just the number. *Above:* Lt. George Pottorf looks for shoreline residents standing out on their docks to pass along information about the WAVE program.

they had no idea whose dock was whose. They just gave us some general landmarks to key on. When our officers arrived at what we hoped was the right dock at 3 in the morning, there was a real concern that things could get dicey. As it turned out, they'd found the right dock. But the suspect had left. We found him later and charged him with reckless display of a firearm. He'd been drinking.

"The underlying issue though, was what would have happened if the officers had responded to the wrong dock? The shooter could have been standing on the next dock over in the dark watching them. Not good," Pottorf said.

The solution: WAVE

The Cummings incident became the catalyst for Pottorf to become more proactive in encouraging dock owners to display their 911 addresses. Pottorf wanted a catchy name for the program and thought of WAVE. There was one problem though; he hadn't filled in the blanks. He didn't know yet what the new acronym stood for.

"I fell asleep one night thinking about it," said Pottorf, "and the next morning I had it: Water Address Vessel Emergency."

Pottorf met with Joy Hill, the public information coordinator assigned to the FWC Northeast Region. Together they mapped out a plan to promote the new program.

"We had extensive coverage in the newspapers, on television and with our own press releases," said Pottorf. "My officers also handed out flyers to shore side residents, when we saw them standing out on their docks. The response has been overwhelmingly positive. What we've noticed is when one dock owner puts up an address, four or five more will follow. So it's catching on."

Building an officer memory base

"One of the biggest benefits to the program is that it builds officer memory base," said Pottorf. "For example, a police officer on his beat drives by Second Avenue and then Third Avenue, and he continues to pass by these streets identified by street signs. That helps him form a memory base for where he is at any given time.

"It's the same way on the water. We ask the residents along the shore to put the street name along with the numbered address on their dock for just this reason. One of my officers told me the other day that he saw Jill Avenue on the end of a dock in a certain canal. He had no idea where Jill Avenue was before, but he does now because he has it in his memory base. And if he's dispatched to a waterborne complaint on Jill Avenue, he'll now know which canal to go to. He won't have to waste time pulling out maps or checking the computer because it's imbedded in his memory."

Resident response

The dockside addresses offer more than just the obvious benefit for law enforcement officers patrolling the water.

"I've had several people," Pottorf said, "who lived on the water tell me, 'we've had friends who tried to find our house by water to have dinner with us and they never found us.' Well, now they can.

"I've only received one negative comment. I did have a woman say, 'Won't that look gaudy on my dock?' And of course my response was, 'Does it look gaudy on the front of your house?' Her husband laughed, he got a kick out of it. I don't see a downside to it. After all, docks need addresses too," Pottorf said. FW

Lt. George Pottorf stands by a sign from the Georgetown Volunteer Fire Department advertising the need for dock street addresses. Local fire departments also respond to emergencies on the water.

News & **Notes**

Surprising results: FWC analyzes its volunteer programs

Volunteers are worth their weight in gold. The proof is in an analysis conducted recently by University of Florida doctorial student Stuart Carlton of the partnership between volunteers and the FWC. Some of Carlton's conclusions were surprising.

The FWC relies on 3,100 volunteers in more than two dozen programs, including Hunter Safety, Ridge Rangers, Project WILD, Chinsegut Nature Center events and a variety of scientific research and resource management projects. The value of their services totals roughly $1.9 million per year, according to Carlton, who collaborated with professors Susan K. Jacobson and Martha C. Monroe on the project.

When Carlton polled FWC volunteers, he noted that 90 percent of them said the FWC seems to appreciate their hard work, and that is an important element in retaining them for the long term. Thirty-five percent have volunteered services at the FWC for more than five years. Three-fourths of them volunteer more than 13 hours per year.

FWC FILES

The Ridge Rangers are one of several groups of volunteers that work with the FWC to improve the state's natural and wildlife resources.

Motivations for volunteers included helping the environment, learning about and supporting the resources they use recreationally and the feeling that they are living close to their ecological values. Carlton and other researchers found a noticeably more intense feeling of motivation in women.

Volunteers indicated the types of work most appropriate for them include working on improving habitats, surveying wildlife populations and public outreach activities. Their least favorite activities included maintenance and fundraising.

"They don't want to feel that they are just doing grunt work," Carlton said. "They want to feel they are contributing something significant."

To learn more about volunteer opportunities at the FWC, visit MyFWC.com/GetInvolved.

Project aims to restore sponges in barren parts of Florida Bay

Marine sponges may not look like apartment buildings, but to shrimps, juvenile lobsters and other animals in Florida Bay, the puffy filter-feeders provide one of the few safe places to live.

In 2007, harmful algal blooms killed sponges in large tracts of the shallow lagoon, where fresh water draining from the Everglades meets the Gulf of Mexico. University of Florida and Old Dominion University researchers are trying to restore the invertebrates by slicing up healthy sponges, then planting the cuttings in affected areas to grow and reproduce.

The results of the study will lay the groundwork for larger restoration efforts that would boost populations of economically important seafood species that depend on sponges, help the state's commercial sponge industry and improve water quality, said Don Behringer, a research assistant professor with UF's Institute of Food and Agricultural Sciences.

"Sponges don't get as much attention as other, more charismatic marine species," said Behringer, co-leader of the project. "But in hard-bottom habitats, they dominate the biomass and are important to ecosystem health."

In Florida Bay, the seabed is a mixture of hard-bottom areas, seagrass meadows and almost featureless sand and mud areas. Within the hard-bottom, marine sponges, some of them several feet in diameter, are the dominant source of structure and shelter, he said. In parts of the bay the animals were so abundant prior to the algal blooms, they were estimated to filter all surrounding water every three days, straining out bacteria they consume as food.

The 2007, algal blooms affected about 200 square miles of the 1,100-square-mile bay, wiping out nearly every sponge in some areas. Similar blooms may have occurred for at least a century, but hard evidence is lacking, Behringer said.

Researchers will try to reintroduce sponges in the Everglades National Park and the Florida Keys National Marine Sanctuary areas of Florida Bay.

FILE PHOTO

Florida is one of the world's major marine sponge providers, producing 60,000 to 70,000 pounds annually.

In this feasibility study, four species will be used: loggerhead and vase sponges, large species that provide habitat for sea animals; and glove and yellow sponges, important to Florida's commercial sponge fishing industry, said Mark Butler, a professor with ODU's biological sciences department and the project's other leader.

Butler said the exact methods used for placing sponge cuttings are still being developed, but it's likely that small sections will be attached to weighted bases and placed on the sea floor. For the next three years, researchers will assess the cuttings' survival, growth and reproduction.

FWC pilot earns top award for outstanding service

FRANK UTERMOHLEN

Capt. Kevin Vislocky (left) of the FWC's Aviation Section presents FWC pilot Joe Johnston with the Outstanding Service Award from the North American Wildlife Enforcement Officers Association.

For 22 years, he has flown the friendly - and, at times, not so friendly - skies above Florida, looking for criminals and lending support to officers in the field.

FWC pilot Joe Johnston's flying abilities have won him a prestigious award from the North American Wildlife Enforcement Officers Association.

The organization, made up of fish and wildlife officers in the United States and Canada, presented the Outstanding Service Award to Johnston, based on his performance in 2008.

Johnston has worked with the FWC since July 1979, starting as a wildlife officer assigned to Gadsden County. He has served as a law enforcement pilot since 1987 and has accumulated nearly 9,000 accident-free flight hours.

According to Capt. Kevin Vislocky, FWC Division of Law Enforcement's Aviation section, Johnston's enforcement efforts and professionalism, both in the air and on the ground, epitomize the Division's motto of "Patrol. Protect. Preserve."

"Joe had more than 560 arrests, citations and warnings in 2008, including cases of trespass, night hunting, taking deer from public roads, possession of illegally killed deer, dozens of fishing and boating related violations, littering, drug possession and indecent exposure," Vislocky said.

"Joe is a model law enforcement officer. Year after year, he provides consistently exceptional work performance while always displaying a positive, can-do attitude, a professional appearance and an inspirational work ethic," Vislocky said. "His efforts are the result not of just one single incident, but of day-in and day-out efforts."

According to Johnston, he could not do his job without the support of his fellow officers.

"I am very honored to receive this recognition from such a large group of fellow officers. I'm thankful to have been blessed with so many years in law enforcement," Johnston said. "I also thank God for guidance and protection, and for my supportive and patient family."

Climate change could heat up America's heartland by 10+ degrees Farenheit

FILE PHOTO

A new tool that allows people to easily see how climate change will directly impact their states shows America's heartland will suffer the greatest jump in temperatures over the next century - with some states potentially heating up more than 10 degrees F, according to an analysis by The Nature Conservancy.

The state-by-state, country-by-country temperature projections are part of a new tool called Climate Wizard that allows people to use an interactive map to explore past and projected climate change data on their computers. With Climate Wizard, users can zoom in on any location to quickly see how temperatures and precipitation may change by month, season or year under different emission scenarios.

The new scientific analysis through Climate Wizard looked at likely temperature changes across the United States over the next 100 years and found that Kansas, Nebraska and Iowa would heat up the most, if emissions continue to rise unchecked, followed by South Dakota, Oklahoma, Missouri and Illinois.

"To many, climate change doesn't seem real until it affects them in their backyards," said Jonathan Hoekstra, Director of Climate Change for The Nature Conservancy. "This study shows that from the food we put on the table to the animals that make our country unique, none of us is immune if temperatures continue to rise as projected."

While Florida ranks low in projected average temperature increase, it is extremely susceptible to sea level rise, not reflected in Climate Wizard. The Nature Conservancy is working statewide with many partners to keep Florida's native ecosystems healthy and help plants and animals survive climate changes. Work under way in Florida by The Nature Conservancy to ensure our natural systems adapt to upcoming stresses includes:

- Rebuilding coral and oyster reefs.
- Restoring wetlands, seagrass beds and native forests.
- Reconnecting streams for fish passage.
- Eliminating invasive species.
- Increasing controlled burning.
- Acquiring inland tracts to allow for plant and animal movement.
- Quantifying carbon sequestration potential for Florida's habitats.
- Working with state and federal officials to pass climate legislation.

The Web site, www.climatewizard.org, contains links to information about the product, its use, and the models used to create it.

News & **Notes**

Wildlife officials to test hunter-harvested ducks for avian influenza virus

FILE PHOTO

Last year, none of the 681 samples taken from hunters' ducks at check stations across Florida tested positive for avian influenza.

Biologists with the FWC and the U.S. Department of Agriculture Wildlife Services will collect samples from hunter-harvested ducks to test for highly pathogenic avian virus - H5N1. Sampling will occur at various times during the migratory game bird hunting season this fall and winter.

Biologists will obtain samples at several duck-hunting hot spots throughout Florida, including the PotashCorp Wildlife Management Area in White Springs, Stormwater Treatment Area 3 and 4 (also referred to as STA 3/4) in Palm Beach County, and the T.M. Goodwin Waterfowl Management Area in Fellsmere.

Hunters will not need to surrender their ducks, and participation is voluntary. Biologists will obtain the samples by swabbing the ducks' respiratory and digestive tracts. Scientists at a diagnostic lab will test the samples for the virus that causes avian influenza and for other diseases.

The sampling is part of a continuing international surveillance effort to determine if migratory birds carry the highly pathogenic H5N1 Asian strain of virus that produces avian influenza in North America. The USDA hopes to collect 44,000 samples nationwide this year, including more than 1,000 samples from Florida. To date, scientists have processed more than 100,000 samples nationwide; none tested positive for the virus, including the 681 collected at check stations in Florida's wildlife management areas.

While it is extremely unlikely that hunters could contract avian influenza from wild birds in Florida, officials recommend taking common-sense precautions to reduce the risk of contracting any disease from wildlife. For instance, do not harvest or handle wild birds that are obviously sick or found dead; wear rubber gloves while cleaning game; clean game outdoors and stay upwind of game while cleaning; and do not eat, drink or smoke while cleaning game.

It is also important to wash hands with soap and water immediately after handling game or cleaning bird feeders. Wash tools and work surfaces used to clean game birds with soap and water, and then disinfect them with a 10-percent bleach solution.

For more information about avian influenza and the FWC's monitoring program, including how to report observations of dead birds, visit MyFWC.com/Safety.

17-foot python seized from Lakeland home

An anonymous tip to the Wildlife Alert Hotline sent FWC investigators to a Lakeland residence in search of two illegally kept Burmese pythons. What was hidden from the world shocked even investigator Daryl Amerson, a 24-year FWC veteran who thought he had seen it all.

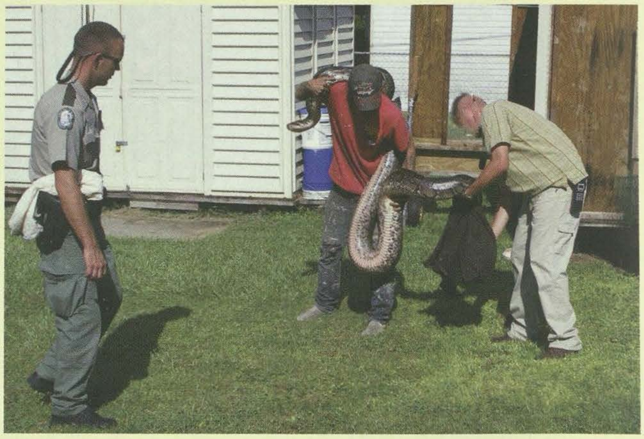
Amerson discovered an 11-foot-long male Burmese python, dwarfed by its female companion, a 17-foot behemoth of the same species that weighed more than 150 pounds.

Michael T. Hall owned the snakes but did not have the required state permit to keep them. The FWC lists Burmese pythons as reptiles of concern, which requires owners to purchase an annual $100 permit.

Owners are required to have the pets microchipped and must follow specific caging requirements based on the size of the reptile. They also must keep a written and approved contingency plan in case of escape or natural disaster.

Hall was charged with second-degree misdemeanors for not having the required permit and not having a critical-incident plan. Additionally, Hall received a warning for not having the animals microchipped. The snakes were taken to a licensed facility.

The new rules for captive wildlife went into effect in January 2008. People who owned reptiles of concern prior to the effective date are still required to purchase the reptile of concern permit.



FWC FILES

***Left to right:** FWC Officer Robert Adams watches as Michael Hall and an FWC undercover investigator (image altered) inspect Hall's 17-foot python.*

The FWC hosts Pet Amnesty Days several times a year. At these events, people who can no longer keep nonnatives as pets can turn them over to the FWC for placement.

At the September FWC meeting in Howey-in-the-Hills, the Commission directed staff to look at the science behind personal-pet ownership of reptiles of concern and breeding and sale by Florida's reptile industry and bring back a report at the next meeting in December in Clewiston.

26 FWC graduates ready for woods and water duty

TIM DONOVAN

It's a tough job, but somebody has to do it, and a new class of FWC law enforcement graduates are only too happy to take on the task.

On Aug. 7, 26 FWC recruits were sworn in, and they have gotten into their trucks and boats and onto their airboats and ATVs and started their jobs in the woods and on the waters of the state.

"It's not a job for everyone," said Capt. Rocky Clement of the FWC academy. "The job is challenging and yet extremely rewarding. What other job allows you to be on an offshore vessel one day and deep in a forest the next? Just a job as an FWC officer."

The FWC recruits became officers after graduating from the Pat Thomas Law Enforcement Academy in Tallahassee. Justice Ricky Polston of the Florida Supreme Court was the guest speaker at the graduation ceremony.

"Because of the separation of powers in our Florida Constitution, we depend on each other in the other branches of government," Polston said. "Together we can make Florida the best it can be. I am proud to be depending on this graduating class, and I thank them and the Commission for their service to protect Florida's citizens and natural resources."

The new officers attended the academy for six months and received a wide array of training, which included accuracy with firearms, vessel operation, defensive tactics, all-terrain vehicle operation and BUI/DUI identification. They spent an additional 14 weeks with a field–training officer.

The FWC's Division of Law Enforcement protects and manages more than 575 species of wildlife and more than 700 species of fish. The division patrols 34 million acres of public and private lands, 8,400 detailed miles of tidal shoreline, 3 million acres of lakes and 12,000 miles of rivers and streams. FWC officers are authorized to enforce all state laws and federal fisheries and wildlife laws.

The graduates and the counties to which they are assigned are as follows:

- Jamie Allen – Levy
- Joshua Allison – Hernando
- Benjamin Barnard – Franklin
- Travis Basford – Palm Beach
- Andrew Brown – Lee
- Megan Gaus – Dade
- Ryan Haney – St. Johns
- Tyler Harrison – Broward
- Randall Hart – Pinellas
- John Hoover – Charlotte
- Matthew Hopp – Broward
- Matthew Humphrey – Brevard
- David Lilley – Hendry
- Cody Loeffler – Brevard
- John Mattox – Orange
- Steven McDaniel – Seminole
- Justin Morgan – Brevard
- David Moss – Martin
- Ronald Perry – Lee
- Jason Phillips – Martin
- Mattison Prowant – Hardee
- Berry Shaw – Charlotte
- Aaron Smith – Monroe
- Philip Stone – Palm Beach
- Joshua Varnadoe – Broward
- Darrin Whitaker – Baker

SRWMD public lands will be more user-friendly

Suwannee River Water Management District is working to make its public recreation lands more user-friendly. Some of the improvements include additional parking lots, informational kiosks and signs marking trails and hours of operation.

The District will also replace all red boundary markers with yellow ones for greater visibility. Yellow bands will be posted every 200 feet and yellow signs every 400 feet along property lines.

The markers are important because not all property is fenced-in because of installation and maintenance costs, explained District Land Management Specialist Edwin McCook.

District lands are open to the public during daylight hours only. Under the District's definition of daylight, visitors may arrive an hour and a half before sunrise and leave an hour and a half after sunset.

"That way those who fish, for example, will have enough time to get out on the water at first light and back to their vehicles after sunset," McCook said.

The District allows some night use for certain activities such as fishing or camping to those who obtain a special use authorization at no cost.

The District is also working to post signage that would show what activities are allowed on each tract. Signs will display symbols depicting allowed activities such as fishing, hiking, camping, etc.

The rules allow FWC officers to issue citations to those who engage in activities other than what is allowed on District property.

For example, enforcing hours of operation helps cut down on vandalism and the possession of alcohol. As a result, District lands are more family-friendly, and the cost of maintenance is less.

Call 386-362-1001 for more information.

News & **Notes**

New school in Duval County recognized as 'green'

The St. Johns River Water Management District commended Duval County Public Schools for developing the first 'green' public school in Northeast Florida, the new Westview K-8 School.

Located on Jacksonville's Westside, Westview offers K-8 instruction and, when fully occupied, will be able to accommodate more than 1,450 students.

The school was constructed with many "green" features, including the use of recycled content materials for design and construction, high-efficiency toilets and low-flow faucets, and the installation of occupancy light sensors in classrooms to conserve electricity. Additionally, the school will be used as a teaching tool that integrates green elements into the curriculum.

The water management district partnered with the school system and the Northeast Chapter of the U.S. Green Building Coalition in the development of the new school, and water management district education staff assisted with the development of a green curricula outline and trained all of Westview's incoming teachers on its educational programs the Great Water Odyssey℠ and Project WET (Water Education for Teachers).

The Great Water Odyssey introduces students to the world of water through interactive, animated computer software. Project WET is a collection of 96 innovative, water-related activities that are hands-on, easy to use and fun.

In the year ahead, the water management district will provide classroom presentations at Westview using its Watershed Action Volunteers, and will assist with developing a Family Science Night event for students and parents.

Visit www.sjrwmd.com/education for more information.

Cold weather may reduce Cuban tree frogs' impact as they move north

Invasive Cuban tree frogs are spreading through Florida, but a new University of Florida study suggests their impact could weaken as they move farther north, because colder weather seems to reduce their average size.

Smaller Cuban tree frogs would lay fewer eggs and be less likely to eat native frogs, said Steve Johnson, an assistant professor with UF's Institute of Food and Agricultural Sciences. Cold weather may also shorten the frogs' breeding season and life span.

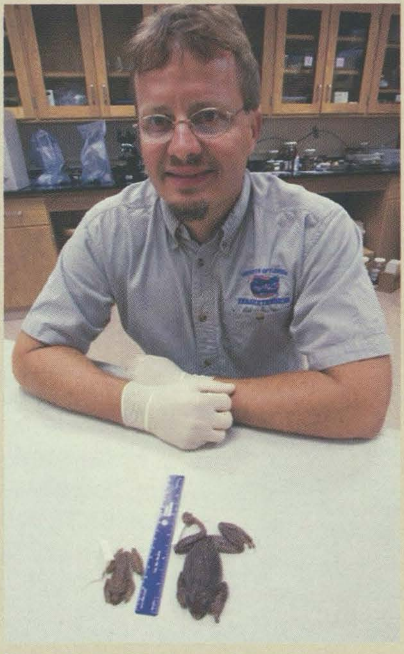
"This is a hint of a silver lining," Johnson said. "We usually don't discover things about invasive species where we say 'hey, there's a little bit of hope here.' Usually it's the other way around."

The findings give wildlife managers and researchers in Southeastern states new reason to monitor local Cuban tree frog sightings and captures, he said. Further observation will confirm whether the frogs continue getting smaller as they spread north, and could provide valuable information to officials preparing for possible infestations.

The frogs were introduced to South Florida in the early 20th century. Today, they're established in most of peninsular Florida, and individuals have been reported in Florida's Panhandle, Alabama, Mississippi, Georgia, South Carolina, Texas, Maryland, Minnesota and Canada.

It's unclear how far north the frogs could survive, but in extremely cold climates they would have to find warm places to ride out the winter, such as heated buildings, he said.

Though not dangerous to people, Cuban tree frogs pose a nuisance. They enter homes, secrete an irritating chemical from their skin, and trigger power outages by climbing into utilities equipment. They're also suspected of depleting populations of native tree frogs.



ERIC ZAMORA, UNIVERSITY OF FLORIDA/IFAS

Steve Johnson shows the size difference between two female Cuban tree frogs. The larger frog is typical of the size the amphibian reaches in its native range in the Caribbean; the smaller specimen is typical of invasive specimens captured in Central Florida.

"Cuban tree frogs are now the most commonly encountered tree frog in South Florida, at least in human-inhabited areas," Johnson said. "It should be the native green tree frogs and squirrel tree frogs."

Cuban tree frogs come in many colors, including white, yellow, green, gray and dark brown. Apart from sheer size, their distinguishing features are unusually large eyes and toe pads, and warty skin.

Despite the problems they cause in Florida, Cuban tree frogs are sold as pets, Johnson said. He cautions people who buy the amphibians to make sure they can't escape, and to never turn them loose in the wild.

"The issue (of invasive animals in Florida) is huge, and I think the general public doesn't realize how great a problem we have," he said.

For more information, see Johnson's publication "The Cuban Treefrog (*Osteopilus septentrionalis*) in Florida" at edis.ifas.ufl.edu/UW259.

Biologists see spawning fish in Marine Protected Area

COURTESY DON DEMARIA

Large school of mutton snapper in the Tortugas.

Biologists recently witnessed an extraordinary sight while conducting an underwater study of mutton snapper in the Florida Keys.

For the first time in Florida waters, scientists with the FWC's Fish and Wildlife Research Institute, the National Oceanic and Atmospheric Administration and the University of South Florida observed this species spawning in a Marine Protected Area in the Florida Keys. The site was established, in part, to protect spawning schools of snapper and grouper in the Tortugas Ecological Reserve.

Mutton snapper is an important species to both recreational and commercial fisheries. When fish group together in large numbers to spawn, they are more vulnerable to fishing pressure. Allowing the fish to spawn without angler pressure will help sustain the fishery. The data collected from this study will help biologists understand the effectiveness of creating no-take Marine Protected Areas to protect a variety of sea life, including fish and coral reefs.

Biologists spotted the large school of spawning snapper while working on an acoustic tagging project. The purpose of this research is to obtain information regarding the movement, spawning and migratory habits of snappers and groupers. They conducted surgeries underwater at depths of up to 120 feet to implant acoustic tags inside the fish. Conducting the tagging at this ground-breaking depth causes less stress to the fish than bringing them to the surface by conventional hook-and-line methods to complete the surgeries.

Biologists will continue to receive data from the tagged fish for the next few years. This information will help them learn more about the movement, spawning and migratory habits of these fish.

For more information on FWRI's marine fisheries research, visit research.MyFWC.com.

Video game takes kids outside

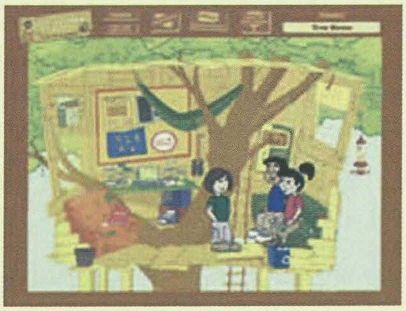
The U.S. Fish and Wildlife Service has a new online video game aimed to encourage kids to go outside and learn about the environment. Designed for children ages 8 to 11, Neighborhood Explorers is accessed through the Service's Let's Go Outside! Web site at www.fws.gov/letsgooutside.

The journey through the game begins when you meet three children – Mia, Lucy and Steve – who gather in a tree house as the school year begins and talk about all the fun outdoor environmental activities they did over the summer. They form a Neighborhood Explorers Club, called the NX Club, and share information about planting gardens with native plants, backyard bird watching and urban wildlife.

By exploring the tree house with your cursor, you can learn about endangered species, conservation heroes and threats to our natural world. Then you can play a fun jeopardy-style trivia game that tests your newly acquired environmental information in an entertaining and interactive venue.

Other activities include recording nature sightings in your own back yard, racing against time to find a missing praying mantis in the midst of an urban neighborhood, and identifying birds in a variety of habitats. When you finish a game, you can receive a gold, silver or bronze patch, depending on how many points you score. Every game is a fun challenge, as well as a valuable educational experience. You also can receive patches for documenting environmental projects and local wildlife, thus reinforcing the connection between the virtual and natural worlds.

Neighborhood Explorers provides an excellent educational opportunity for children and parents. By participating in this game, kids learn about nature and are encouraged to spend more time outside. Steve's summer activity, for example, is simply exploring and observing nature. Children also can learn about problems that the environment is facing, such as pollution and invasive species, and discover ways to help solve these problems.



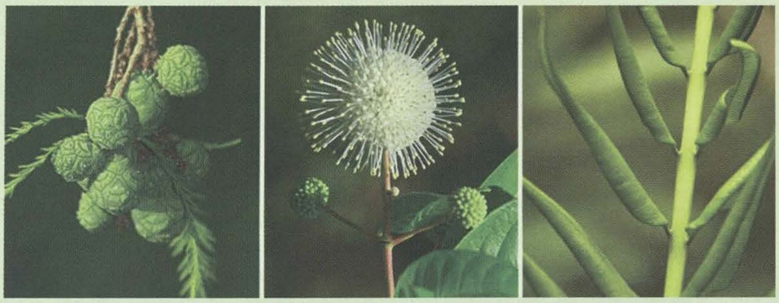
TOM COLLOPY AND MARY FRISCHE

A new video game launched by the USFWS encourages kids to explore the outdoors.

Unstructured play and discovery outside is an important part of childhood, and Neighborhood Explorers reinforces this through a medium that kids are familiar with: a video game. This is a great opportunity to show kids how caring about conservation and the environment can make a real-life difference in the world.

News & **Notes**

SFWMD plants 3,000 native trees, shrubs to replace exotics on tree islands



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Left to right: *Bald cypress, buttonbush and leather fern are among the 17 native tree and shrub species that were recently planted in place of exotic species on tree islands in the Rotenberger Wildlife Management Area.*

In the ongoing effort to protect the Everglades from invasive species, the South Florida Water Management District is restoring natural habitat in a 19-acre section of the Rotenberger Wildlife Management Area, a 29,000-acre tract of remnant Everglades in Southwestern Palm Beach County. A team of workers recently planted 3,000 native trees and shrubs on tree islands in the management area as part of the restoration effort.

District scientists are working in partnership with the FWC to remove the exotic Peruvian primrose willow and Brazilian pepper from the tree islands, which prevent native species from thriving in the area.

"The Brazilian pepper may not draw as many headlines as Burmese pythons, but the damage this exotic species does to the South Florida ecosystem can be just as devastating," said SFWMD Governing Board member Patrick Rooney. "By replacing the Brazilian pepper and other invasive species with native plants, we are restoring this slice of the Everglades to its natural state."

Tree islands occur in the Everglades at elevations slightly higher than the surrounding marsh areas. The distinctive plant communities provide critical habitat for a multitude of animals, including white-tailed deer, alligators, dozens of bird species and the endangered Florida panther.

The new mix of 17 native tree and shrub species on the Rotenberger tree islands includes buttonbush, leather fern, bald cypress, cocoplum, dahoon holly, gumbo limbo, firebush and wild coffee. With the plantings complete at the site, scientists will evaluate the overall success of the project by measuring soil build-up or depletion, stress levels of the newly planted trees and shrubs, canopy development and use by wildlife.

For more information on the District's Vegetation Management Program, visit www.sfwmd.gov.

Sick fish may get sicker: Climate change and other stresses expected to affect entire populations

Entire populations of North American fish already are being affected by several emerging diseases, a problem that threatens to increase in the future with climate change and other stresses on aquatic ecosystems, according to a noted U.S. Geological Survey researcher.

"A generation ago, we couldn't have imagined the explosive growth in disease issues facing many of our wild fish populations," said Dr. Jim Winton, a fish disease specialist at the USGS Western Fisheries Research Center. "Most fish health research at that time was directed toward diseases of farmed fish."

In contrast, recent studies in natural aquatic systems have revealed that, in addition to being a cause of natural death, infectious and parasitic fish diseases can produce significantly greater mortality in altered habitats, leading to population fluctuations, extinction of endangered fish, reduced overall health and increased susceptibility to predation, said Winton.

In addition, populations of certain fish species have suffered catastrophic losses after nonnative diseases were first introduced into a water body.

"The scientific community is increasingly concerned that global trade, extensive habitat alteration, accumulations of contaminants and other human-caused stressors, including climate change, will affect the distribution or severity of fish diseases and contribute to increasing population-scale losses in these important natural resources," Winton said.

Disease is often ignored as a factor affecting wild populations of fish and wildlife because the effects are difficult to observe and quantify, Winton noted. But as cold-blooded animals, fish are highly dependent on environmental conditions, especially temperature, to help maintain critical physiological processes such as immune function that can affect whether a fish gets a disease or parasite, how it is affected by it, and how the disease progresses.

FILE PHOTO

Disease often is ignored as a factor affecting wild populations of fish and wildlife because the effects are difficult to observe and quantify.

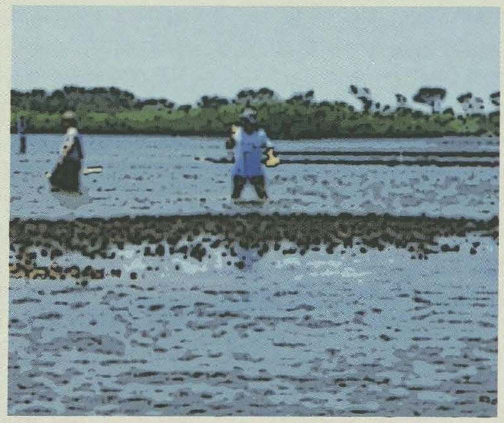
Winton said increased scientific recognition of fish diseases as a potential population-limiting factor in wild populations of fish is partly the result of the emergence of high-profile diseases such as whirling disease in wild-spawning rainbow trout in the Rocky Mountain West and viral hemorrhagic septicemia in the Great Lakes.

Scientists study how well shellfish clear muddy waters

Scientists in Florida and across the East Coast are looking to shed new light on whether restoring oyster reefs helps improve the clarity of water, benefiting seagrasses and other aquatic life.

Teams of researchers installed hundreds of light sensors near natural and restored oyster reefs in the Mosquito Lagoon and Loxahatchee River to measure light levels around oyster reefs. The group included scientists from The Nature Conservancy, the University of Central Florida, the Loxahatchee River District and the National Oceanic and Atmospheric Administration.

"Lots of folks have shown that in a lab or even in a plastic bucket, oysters can quickly improve water quality and clarity, but few people have measured it directly on any scale in the field," said Rob Brumbaugh, the restoration director for The Nature Conservancy's Global Marine Team. "This is the first time this particular approach has been tried, and we hope it provides a new method and direction for oyster restoration and research."



PHOTOILLUSTRATION

Teams of researchers installed hundreds of light sensors in the Mosquito Lagoon and Loxahatchee River to measure light levels around oyster reefs.

Brumbaugh hopes the light sensors will provide further evidence showing that oysters clear the water as they feed on microscopic plants that grow in the bay. If so, water clarity will be greatest closest to the oyster reefs. Sensors also have been placed in areas that have sandy bottoms and no reefs to compare the water clarity away from oysters. He hopes that additional direct measurements will encourage people to consider oyster reefs valuable, not just for harvests, but for the other natural benefits or ecosystem services they provide.

Globally, 85 percent of shellfish reefs have been lost, according to a recent study led by The Nature Conservancy. Shellfish reefs and beds are essential to the health of marine ecosystems, yet they are almost always solely managed for harvest rather than as habitat, according to the report.

In the Loxahatchee River, oysters were once widespread, but the system of reefs has declined dramatically over many decades, said Bud Howard, water resources director for the Loxahatchee River District.

The Nature Conservancy, the University of Central Florida and a wide array of groups have worked to restore more than 20 acres of oyster reefs in Mosquito Lagoon, thanks to a grant from NOAA. In November, the Loxahatchee River District, The Nature Conservancy and NOAA installed one of the first artificial reefs in the Loxahatchee River with the help of local volunteers.

Scientists waded waist-deep in the northwest fork of the Loxahatchee River to install hundreds of light sensors. The sensors sit atop a thin PVC pipe pounded into the bottom on and around the oyster reefs. The light sensors are programmed to measure and record light levels every five seconds, providing a record of the reef's impacts over several days and tidal cycles.

To learn more about shellfish conservation, visit nature.org/shellfish.

No evidence of chronic wasting disease found in Florida white-tailed deer

FILE PHOTO

The FWC has not found any evidence of chronic wasting disease after extensive testing of the state's white-tailed deer population.

The FWC tested 582 free-ranging deer during the past year and more than 4,000 deer during the past seven years, with no CWD-positive results.

"While we can never say that Florida is entirely free of the disease without testing every deer, this sample size gives us confidence that if CWD is present in Florida, it is at low levels," said Dr. Mark Cunningham, FWC's wildlife veterinarian. "However, even low numbers of CWD-positive deer would be cause for concern, so we plan to continue testing for the foreseeable future."

CWD is a contagious neurological disease that has been found in captive and wild mule deer, white-tailed deer, moose and Rocky Mountain elk within several midwestern and western states. The disease causes degeneration of the brains of infected animals, resulting in emaciation, abnormal behavior, loss of bodily functions and death.

Once again, this hunting season, the FWC is turning to hunters and members of the public for assistance in helping monitor the state's deer herd for CWD.

"We're asking hunters to report any sightings of sick or emaciated deer, or deer dead of unknown causes," Cunningham said. "If you see such a deer, call toll-free 866-CWD-WATCH (293-9282). Please do not handle the deer."

News & **Notes**

FWC Officer-of-the-Year wins additional awards

FWC FILES

Officer Bret Gill has earned numerous awards for heroism and dedication.

He pulled a woman from a burning car, saving her life. He helped capture a suspected murderer. He arrested people for night hunting, illegal fishing, littering, drug possession and active felony warrants. He wrote 168 citations and warnings last year, which is impressive for the rural county where he works.

Also, he was selected as the FWC Officer of the Year earlier this year. And now, Officer Bret Gill has two new plaques to add to his collection.

Gill recently won two prestigious awards from the North American Wildlife Enforcement Officers Association.

The 8,000-member organization, made up of fish and wildlife officers in the United States and Canada, presented the Torch Award and the Life Saving Award to Gill, based on his performance in 2008.

The Torch Award is presented to officers who have worked in law enforcement less than five years and encourages professional development. The officer has to have demonstrated a genuine desire to protect the resource and develop professionally. The officer also must have demonstrated exceptional ability and initiative in the performance of duties.

"Officer Gill definitely fits the criteria for this award," said Capt. Roy Brown, area supervisor.

Scientists to investigate wind power impacts on migratory wildlife

Thirty top wildlife scientists have announced agreement on some of the highest research priorities to help America's rapidly growing wind energy industry produce much-needed alternative energy – while also providing safe passage for birds and bats. This coalition of scientists from industry, government, nongovernmental organizations, and universities met recently in Racine, Wisc., to address unanswered questions about how continued wind energy development will affect migrating birds and bats. The meeting was hosted by the Cornell Lab of Ornithology, the American Bird Conservancy and the Johnson Foundation at Wingspread.

"We see great potential in wind energy for addressing global climate change and reducing America's reliance on fossil fuels," said Dr. Michael Fry of the American Bird Conservancy. "It's critical we act now to understand the interactions between wind energy installations and birds and bats."

"Billions of birds migrate annually, taking advantage of the same wind currents that are most beneficial for producing wind energy," said Dr. Andrew Farnsworth of the Cornell Lab of Ornithology. "We know that in some locations a small percentage of wind turbines may cause the majority of bird and bat deaths. As wind power develops further, we need to know more about how placement, design and operation impact birds and bats as well as how habitat and weather conditions affect potential hazards."

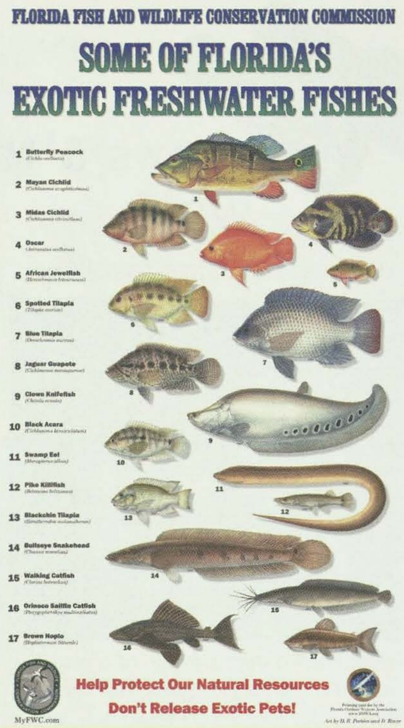
PHOTOILLUSTRATION

Currently, in some locations, a small percentage of wind turbines may cause the majority of bird and bat deaths.

The scientists addressed the critical information that could be collected using cutting-edge tools such as weather surveillance radar, thermal imaging, and microphones directed skyward to map migrations by day and night. New research will build upon monitoring and research studies of birds and bats before and after construction of existing wind energy facilities as well as work done by other researchers. Top research priorities identified by the coalition include:

- Studying bird and bat behaviors and more accurately estimating mortality at existing wind turbines.
- Using current and newly obtained information on bird and bat population numbers and distributions to focus research on critically important migratory routes and timing.
- Documenting how interactions of birds and bats with turbines are affected by factors such as weather, topography and their distribution within airspace swept by wind turbine blades.
- Establish standardized methods for pre- and post-construction studies of bird and bat behavior at wind facilities.
- Conduct research on the best methods for mitigating the impacts of wind energy development on birds and bats.

"Conducting this research will help the wind industry make informed, science-based decisions about where future wind energy projects can be built, and how they can be operated to minimize the impact on migrating wildlife, while still providing much-needed alternative energy," said Dr. John Fitzpatrick, director of the Cornell Lab of Ornithology.



Exotic fishes poster now available

"Don't release exotic pets!" That's the message behind a colorful new poster available through a joint effort between the FWC and the Florida Outdoor Writers Association.

The 20" x 36" poster, titled *"Some of Florida's Exotic Freshwater Fishes,"* displays 17 species of nonnative fishes currently established in Florida. These exotic species were introduced by man from foreign countries, and with a couple of exceptions, are unwanted residents in the Sunshine State.

There are 34 reproducing exotic fishes established in Florida, according to the FWC's Division of Habitat and Species Conservation. The poster depicts the most widespread or commonly caught species.

Wildlife artist Diane Rome Peebles produced 15 of the illustrations used in this poster. The other two illustrations were created by well-known wildlife artist Duane Raver. University and federal government researchers familiar with each species advised the artists to help create detailed and accurate depictions.

The new "Exotic Freshwater Fishes" poster was designed as a sister-publication to the FWC's *"Freshwater Fishes"* poster.

"The FWC actually initiated this project several years ago," said FWC biologist Paul Shafland, who along with biologist John Cimbaro, created the poster's design. "Without FOWA's generous funding, it would not have come to fruition at this time. We are very grateful for their contribution."

FOWA provided $2,500 for printing 9,300 posters, which are available to the public at no cost. The FWC hopes to convey a simple message.

"It is illegal to release any nonnative fish or any other nonnative organism in Florida," said Scott Hardin, the FWC's exotic species coordinator. "The only way to really stop exotics is to let people know they should never release them."

The exotic fishes poster is online in a reduced, printable size at MyFWC.com. A full-size poster is available at any of the FWC's regional offices.

More information about exotic species in Florida is at MyFWC.com/Nonnatives. The FWC is reminding Floridians: "Help protect our natural resources. Don't release exotic pets!"

FWC asks anglers to help gather reef fish data

Biologists with the FWC's Fish and Wildlife Research Institute request angler assistance with a research project focusing on red snapper and other reef fish on Florida's Gulf Coast. This project will provide fisheries researchers and managers with much of the catch-and-release survival information they need for assessing reef fish stocks.

Reef fish include a variety of snapper and grouper species commonly targeted by recreational anglers. Anglers can contribute to reef fish research by participating in angler surveys. They also can help by reporting tagged fish to the Angler Tag Return Hotline at 1-800-367-4461.

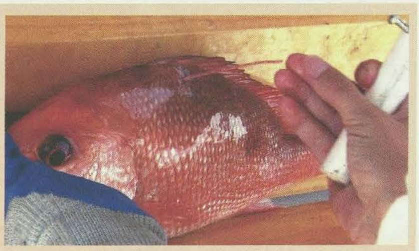
As part of the research, FWRI biologists will approach anglers at public areas such as boat ramps, fishing piers and marinas to request participation. These biologists will distribute survey cards designed to collect detailed information on fishing trips in the Gulf of Mexico. This information includes where red snapper are caught and released, the type of equipment used and the condition of the fish when released.

Anglers can also e-mail their name and address to FishStats@MyFWC.com to obtain a postage-paid survey card in the mail. Downloadable data sheets are also available on the FWRI Web site at research.MyFWC.com.

Additionally, each month FWRI will mail surveys to a random sample of licensed saltwater anglers. These surveys focus on the habits of anglers who target reef fish. Survey questions include when and how often anglers fish, as well as the type and number of fish they harvest or release.

Biologists request that anglers respond to the survey, even if they are not fishing for reef fish.

FWRI biologists are tagging and releasing reef fish back into the wild to evaluate the survival of released fish. For this project, biologists are placing an orange tag near the dorsal fin of the fish. Each tag has a unique number printed on the side.


CHRIS BRADSHAW

A biologist checks a red snapper's tag.

When anglers catch a fish with one of these tags, they should call the Angler Tag Return Hotline. Biologists would like to know the species of fish, tag number, date and time of capture, where the fish was caught, fish length, type of bait used and whether the fish was kept or released. If the fish is released, anglers should leave the tag in the fish so biologists can continue to collect data. Receiving this information is important for the success of this project.

Anglers will receive a token of appreciation for participating in this study.

News & **Notes**

FWC wins multiple communication awards

DAVID MOYNAHAN

David Moynahan's photo of a young alligator won a 2nd place ACI award.

The FWC picked up eight awards this August from the Association for Conservation Information, an organization of natural resource conservation communicators.

- 1st Place - One-time Publications (books/reports) - *"Wildlife 2060"*
- 1st Place - Regulatory Publications - Saltwater Fishing Regulations
- 1st Place - Print News - *"FWC Biologist Rescues Drowning Bear"* and *"Celebrity Bear Moved to Zoo"*
- 2nd Place - Regulatory Publications -Hunting Regulations
- 2nd Place - Photography - *"Young Denizen"* - David Moynahan
- 2nd Place - Internal Communication - *"From the Sultan of Syntax"* posters
- 2nd Place - Education - Vote4Bird
- 3rd Place - Big Ideas, Small Budgets - Featured Creature: Sea Turtles

Florida Wildlife Magazine won four awards from the Florida Magazine Association.

Silver - Overall Use of Photography
Silver - Best Illustration - *"Small boat navigation"* (March/April 2009) - Fritz Seegers
Silver - Best Illustration - *"Fishin' for Crabs"* (May/June 2008) - John Papesca
Bronze - Best Service Feature - *"Casting for tracks"* (Sept./Oct. 2008) - Bob Lee

Widespread occurrence of intersex bass found in U.S. rivers

The most comprehensive and large-scale evaluation of intersex fish documented the widespread condition in smallmouth and largemouth basses in numerous river basins throughout the United States according to U.S. Geological Survey research.

Of the 16 fish species researchers examined from 1995 to 2004, the condition was most common by far in smallmouth and largemouth bass: a third of all male smallmouth bass and a fifth of all male largemouth bass were intersex. This condition is primarily revealed in male fish that have immature female egg cells in their testes, but occasionally female fish will have male characteristics as well.

JO ELLEN HINCK/U.S. GEOLOGICAL SURVEY

A USGS researcher examines a bass for abnormalities while in the field in Alabama.

Scientists found intersex fish in about a third of all sites examined from the Apalachicola, Colorado, Columbia, Mobile, Mississippi, Pee Dee, Rio Grande, Savannah and Yukon river basins. The Yukon River basin was the only one where researchers did not find at least one intersex fish.

Although intersex occurrence differed among species and basins, it was more prevalent in largemouth bass in the southeastern U.S., said Jo Ellen Hinck, a biologist at the USGS Columbia Environmental Research Center. The researchers also documented intersex in channel catfish for the first time.

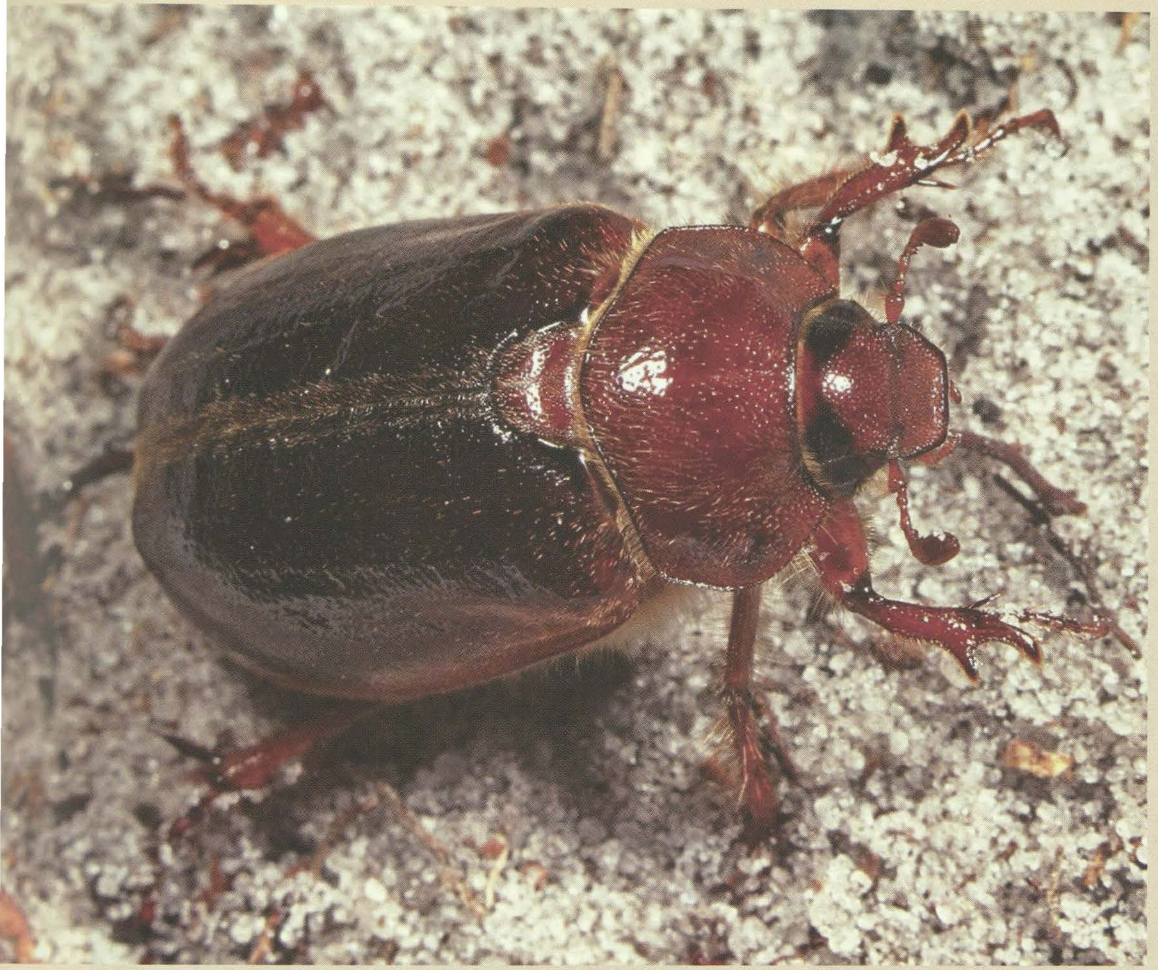
"Although the USGS has already documented the severity of intersex in individual basins such as the Potomac, this study reveals the prevalence of intersex is more widespread than anyone anticipated, said Sue Haseltine, associate director for biology at the USGS. "This research sends the clear message that we need to learn more about the hormonal and environmental factors that cause this condition in fish, as well as the number of fish afflicted with this condition."

The study, Hinck said, presents the observed occurrence of intersex in a variety of freshwater fish species, but not potential causes.

"This study adds a lot to our knowledge of this phenomena, but we still don't know why certain species seem more prone to this condition or exactly what is causing it. In fact, the causes for intersex may vary by location, and we suspect it will be unlikely that a single human activity or kind of contaminant will explain intersex in all species or regions.

"We know that endocrine-active compounds have been associated with intersex in fish, but we lack information on which fish species are most sensitive to such compounds, the way that these compounds interact to cause intersex and the importance of environmental factors," Hinck said. "Proper diagnosis of this condition in wild fish is essential because if the primary causes are compounds that disrupt the endocrine system, then the widespread occurrence of intersex in fish would be a critical environmental concern."

Sixty percent of male bass examined at the Apalachicola River at Blountstown were intersex.



New beetle discovered with help of state wildlife grant

The Auburndale scrub scarab was recently discovered on the Winter Haven Ridge in Central Florida.

COURTESY OF FLORIDA NATURAL AREAS INVENTORY

A state wildlife grant for a study to enhance the state's database on rare invertebrates yielded more than expected. The grant, awarded to the Florida Natural Areas Inventory, brought a rare discovery: a new beetle species called the Auburndale scrub scarab, or *Polyphylla starkae*.

Donna Stark, a volunteer with the project, found the medium-sized beetle in a patch of scrub near Auburndale on the Winter Haven Ridge in Central Florida in 2007. She made a note that it was a large *Phyllophaga*, which is a group of scarab beetles. It wasn't until 2009, when she began identifying all the specimens collected, that she realized it could possibly be a new species and sent it for identification to Paul Skelley at the Florida State Collection of Arthropods.

"Who knows what else might be out there hiding in other undersurveyed areas in the state?" said Dave Almquist with the inventory group. "This just shows how little we know."

The FWC's Wildlife Legacy Initiative runs the State Wildlife Grants Program. In the application for the grant, the Florida Natural Areas Inventory noted that invertebrate species far outnumber the combined total of plant and vertebrate species in Florida, yet they have received the least attention from natural resource agencies. Destruction and degradation of habitat and localized distributions may contribute to their extinction without more data and careful management. Finding a new species of any wildlife in Florida is important news for the FWC and its partners.

"It's very exciting to find a new species," said Dr. Thomas Eason, deputy director of the FWC's Division of Habitat and Species Conservation. "Anytime we find more diversity among species we are heartened. We're happy to have been a partner with the Florida Natural Areas Inventory in this discovery."

Invertebrates serve as potential indicators of ecosystem trouble and provide vital services to the environment and humans as well. They are pollinators, pest controllers and vital players in the food webs. The estimated annual economic value of wild insect ecological contributions, not counting other invertebrates or domesticated honey bees, is $57 billion in the United States, according to a 2006 article in "*BioScience*" magazine.

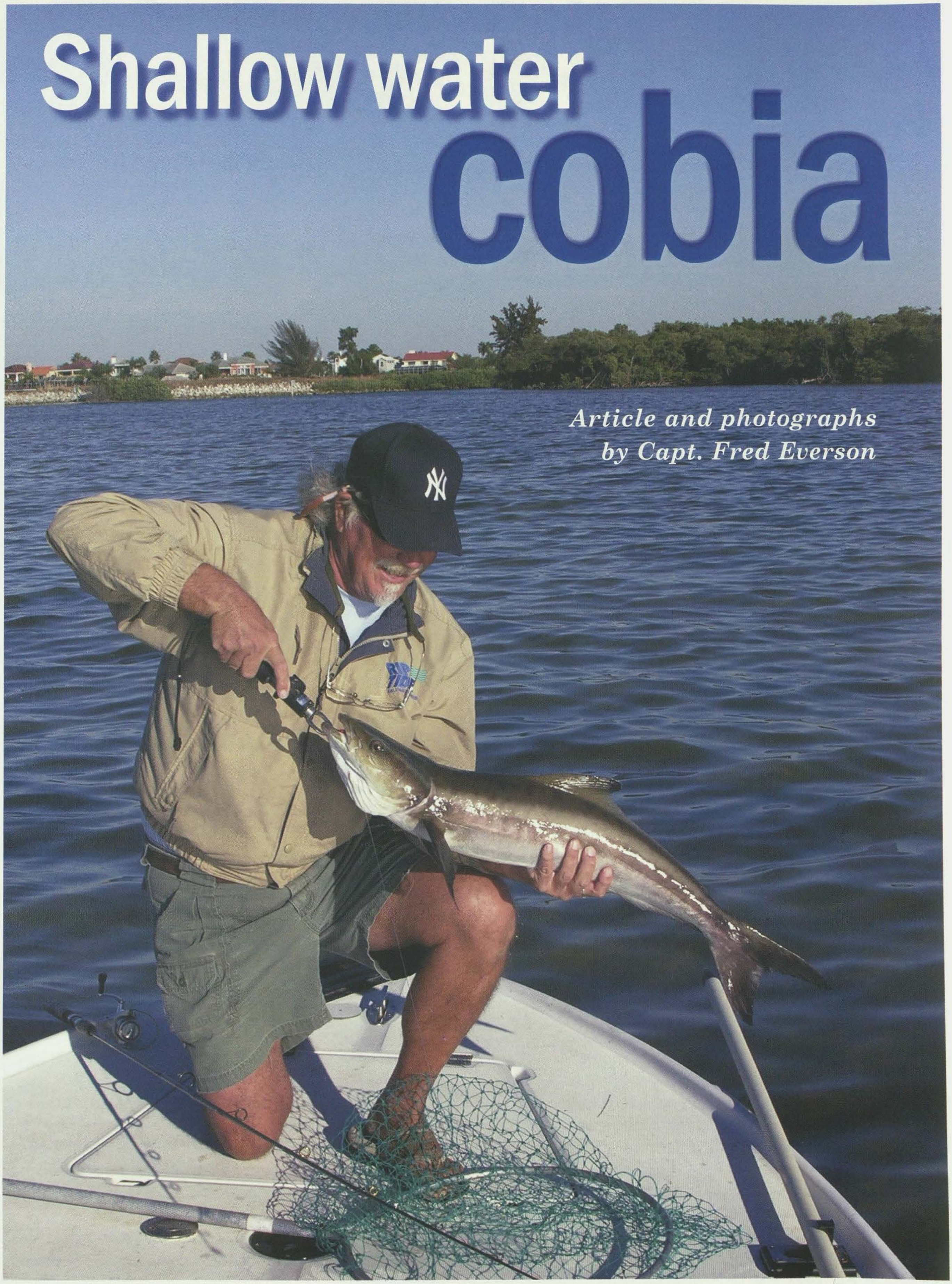
"All of these ridges need preservation while it is possible," Skelly said. "Once an animal is gone, whether known or not, it is gone forever, and we have lost any potential to benefit from its existence."

Much more still needs to be discovered about the Auburndale scrub scarab. Scientists have never seen its larvae and know relatively little about its habits, including how long it lives and whether it occurs anywhere other than on one tiny patch of scrub. As for the future, Almquist is certain about one thing.

"Finding this beetle makes it obvious that we really need to survey all public lands, especially those with rare habitats," Almquist said.

Shallow water cobia

Article and photographs by Capt. Fred Everson



November is a transitional month for many species of fish on Tampa Bay, and it can be one of the most productive months for sight-fishing cobia (also known as ling) on the flats. With a sudden drop in water temperature, the big ling often get trapped in the bay, whereas they will migrate south if the change is gradual. They will gravitate toward the hot water outflow of power plants around the bay when it gets really cold. But on the unseasonably warm days when the sky is clear and the sun is high, they will cruise the flats. These fish are usually hunting for something to eat, and all it takes to hook up is an accurate cast with some soft plastic – they like eels, jerk baits and 5-inch mullet rigged on half-ounce jig heads.

Last November, I noticed an unusual behavior with cobia. I saw several fish laid up on the bottom, motionless as nurse sharks. I was drifting across a flat looking for redfish and came upon three fish sitting on the bottom in 2 feet of water. I dropped a jig in front of them and all three fish went after it soon as it splashed. The fish I hooked turned out to be a juvenile cobia about 28 inches long, and once it felt the barb, it was game on. This fish was anything but lethargic as he tailwalked across 10 yards of skinny water, and quickly took 60 yards of 10-pound test line. Not what you would expect from a fish that looked to be asleep.

I have since seen this odd behavior a dozen times, and every time I put a lure in front of these stationary fish, one of them ate it. I don't know what they are doing when they sit still like that, but they sure aren't asleep, and they always seem to be ready for a meal. Maybe they are in the ambush mode, but in clear water over bare sand, they are hardly invisible.

If the wind is favorable, I can drift parallel to the shoreline – my preferred way to hunt for fall cobia. The jerkbait makes more sense here than the eel, which is a tad too large to toss to redfish, which inhabit the same stretch of water. The dark-colored jerkbait will draw strikes from either fish, and I have also caught quite a few flounder on the jerkbait while blind-casting.

Wind reduces visibility, but unlike redfish, cobia aren't boat shy, even if the outboard is running. I often stand atop my poling platform and drift when I'm by myself. If I'm fishing with someone else, I let them drive the boat at idle speed while I look for fish from the platform.

Live bait will certainly catch cobia, but it simply doesn't cast as well as a half-ounce jig-head. The farther from the boat you fish, the better your chances are. Sometimes it takes 30 feet for the fish to make up its mind whether or not to strike the bait, and the real trick to making them hit is to keep the bait moving. If you slow the lure down, the fish has too much time to think about it. And if the fish can see you and the boat, it will probably shy away.

Smaller cobia are much more aggressive than bigger ones. This has nothing to do with intelligence and more to do with inexperience. A 25-pound cobia is around 2 years old, and any fish that grows so fast has to be a veritable eating machine. But once

***Below:** Cobia, often traveling in pairs and small groups, are found in clear, shallow water in the fall. **Facing page:** Capt. Fred holds a cobia that was a couple of inches shorter than the limit and was quickly returned to the water.*

A stout net is a must for such rambunctious fish. Fish in this size-range should be netted or landed by hand since it is difficult to know if they meet the 33 inches fork length minimum size limit.

hooked, they catch on pretty quick to the dangers of hook-and-line. The bigger fish are harder to fool because they have probably played this game several times. I've made perfect casts to some very big cobia and their non-reaction to the lure is frustrating, if not downright insulting. This is one instance where I like to have a hand-sized pinfish in the well. Even then, they can be pretty shy about eating it. I tossed a pinfish in front of a 40-pound fish years ago in 2 feet of water, and it circled it three times before it finally pounced.

I don't think cobia see all that well, and they have a short strike zone. The occasional fish might charge a bait from 10 feet away, but more often you need to pass it 3 feet in front of its nose to generate a strike.

Cobia also like to keep company in the fall. Most often they travel with big eagle rays on Southshore Tampa Bay, but I have also seen them trailing manatees, and believe it or not, bull sharks. Cobia in the company of sharks are hard to catch because the sharks are much warier than the rays and spook easily. In the clear water of the fall, the rays stand out at a great distance. If I spot a ray 100 yards from the boat, I will idle to within casting distance to look for a trailing cobia. Sometimes they are right on the ray's back and hard to see. Other times they travel beneath the ray and all you see is the tip of the fish's tail. Fish in the company of rays will usually eat – but take care not to spook the ray with the cast. If the ray sprints off, the cobia will usually spook and refuse to hit.

Best to position the boat carefully – rays and cobia are not all that shy of an idling outboard. I have even had several cobia sneak up behind the boat and follow in the wake. On one occasion, I cast to a fish four or five times before I finally got it to take, but all of my missed casts were wide of the mark and didn't scare the ray the fish was travelling with. When I finally put a lure 3 feet in front of the cobia's nose, it couldn't resist.

Cobia often travel in pairs, and if you hook one fish, the other fish will usually stay with it. If you can get a lure in front of the other fish, it will usually strike. I have done this once, but things got really crazy with the double hook up, and there is always the chance of fouling the line trying to hook the second fish. I also have seen pods of six or seven fish travelling together, though not nearly as often as I have encountered pairs.

Fishing for cobia in November and December is open-water flats fishing, so you don't need the heavy tackle required for structure fishing in the middle of the bay. I use medium action spinning rods and reels spooled with 10-pound-test monofilament, tipped with 3 feet of 30-pound leader. I carry a gaff for fish that are obviously over the 33-inch-to-the-fork-of-the-tail limit, and a large net for questionable fish.

You should take care when handling cobia. They have a habit of coming to life once you get them in the boat. Also, they have a set of retractable spines along the dorsal fin that are razor sharp. I found out about them the hard way and have a scar on my left hand to prove it.

When the weather is unseasonably warm in late fall and early winter, I always carry a rod rigged with a half-ounce jig and jerk bait. Redfish and cobia share the same habitat this time of year, and with that bait, I'm ready for either. The best time of day to spot fish is between 10 a.m. and 2 p.m. when the sun is high in the sky, and for cobia, I prefer a high tide over a low. The water is never clearer, and aside from cobia and redfish, I get to see plenty of sharks, flounder and even the occasional snook. Indeed, winter sight fishing on Tampa Bay is one of the best things about living in Florida, especially when it's warm enough to do it in shirtsleeves and shorts. FW

Study of isolated snakes could help shed light on venom composition

SARAH KIEWEL/UNIVERSITY OF FLORIDA

Darryl Heard anesthetizes a cottonmouth snake in preparation for venom extraction. Heard and Ryan McCleary have collaborated to develop a safe, reliable and humane technique for collecting venom from cottonmouths — an essential part of the process of making antidotes for snake-bite victims.

While studying a way to more safely and effectively collect snake venom, University of Florida researchers have noticed the venom delivered by an isolated population of Florida cottonmouth snakes may be changing in response to their diet.

Scientists used a portable nerve stimulator to extract venom from anesthetized cottonmouths, producing more consistent extraction results and greater amounts of venom, according to findings published in August in the journal *Toxicon*.

The study of venoms is important for many reasons, scientists say.

"The human and animal health benefits include understanding the components of venom that cause injury and developing better antivenin," said Darryl Heard, an associate professor in the UF College of Veterinary Medicine's Department of Small Animal Clinical Sciences. "In addition, the venom components have the potential to be used for diagnostic tests and the development of new medical compounds."

But in addition to showing the extraction method is safer, more effective and less stressful to both snake and handler than the traditional "milking" technique, Heard and Ryan McCleary, a doctorate candidate in biology in UF's College of Liberal Arts and Sciences, discovered the venom from these particular snakes differs from that of mainland snakes, most likely because of their unique diet of dead fish dropped by seabirds.

Heard and McCleary collaborated to develop a safe, reliable and humane technique for collecting venom from cottonmouths as part of a larger study on a specific population of snakes that reside on Seahorse Key, an isolated island near Cedar Key on Florida's Gulf Coast.

The venom collection study included data from 49 snakes on Seahorse Key.

"Snakes on this island are noted for their large size," said Heard, a zoological medicine veterinarian with additional expertise in anesthesia.

He added that Harvey Lillywhite, a professor of biology at UF and McCleary's predoctoral adviser, has confirmed that cottonmouths on Seahorse Key eat primarily dead fish dropped by birds in a large seabird rookery.

Lillywhite also directs UF's Seahorse Key Marine Laboratory, located in the Cedar Keys National Wildlife Refuge. McCleary hopes to build on earlier studies about the snakes' ecology and to explore whether evolutionary changes may have affected the composition of the snakes' venom.

"My interest is in the evolutionary aspect," McCleary said. "If these snakes already have an abundant source of dead prey, why do they need venom?"

Preliminary findings show some differences in venom components.

Traditionally, venom has been collected from venomous snakes by manually restraining the animal behind the head and having it bite a rubber membrane connected to a collecting chamber.

"This requires the capture of an awake snake, which increases the risk of human envenomation and also is stressful to the snake," Heard said, adding that manual collection of venom also does not guarantee that all of the venom is collected.

The nerve stimulator is used in human anesthesia to measure the effect of muscle relaxants.

"It delivers a series of electric stimuli, of very low voltage and amperage, and causes no pain or tissue injury," Heard said. "The electrodes are placed behind the eye, across the area of the venom gland. The nerve stimulator sends a current across the gland, causing reflex contraction and expulsion of the venom."

The technique allows collection from snakes that might not otherwise give up their venom, which is essential in the process of creating antivenins for victims of a snake bite, Heard said.

"The stimulator is battery-powered and relatively inexpensive," he said. "In addition, the anesthetic we used, known as propofol, can easily be transported."

Propofol, which has been prominent in news headlines recently as being linked to the death of singer Michael Jackson, is a short acting anesthetic administered by intravenous injection. The drug is commonly used to anesthetize animals in veterinary clinical practice, but it is not believed to have previously been used to anesthetize snakes for venom collection.

TIM DONOVAN

FWC Executive Director Ken Haddad retires

By Henry Cabbage

When Ken Haddad walks out of the Farris Bryant Building in Tallahassee at the end of this year, he'll leave an agency that changed much during his 7 1/2-year term as executive director.

He took the job in May 2002 and almost immediately began restructuring and refocusing the Florida Fish and Wildlife Conservation Commission to make it more efficient and more effective and, most importantly – especially to him – to open communication lines with the people affected by the FWC's decisions.

"That's what I think happened here – a change in philosophy that nurtured a healthy working relationship with our stakeholders," Haddad said. "Generally, they like us, and they like working with us."

He said the new structure of the agency – turning overlaps into coordinated efforts and establishing divisions that revolve around broad programs, rather than individual species – has set the FWC up to shine among other conservation agencies.

"We're getting to be the best in the country," he said. "We're making wise decisions."

Haddad's journey toward retirement as head of the FWC began when he moved to Florida with his family to Ormond Beach in 1959. He was about 7 years old, was the son of a Presbyterian minister and had a mom who was an educator.

"My mom used to drive my three siblings and me to a bridge and drop us off for a day of fishing," he said. "You could do that back then. I had caught my first fish, a northern pike, when my father took me fishing when I was a child in Minnesota, but it was when we moved to Florida that I turned into an avid angler, swimmer and surfer."

The Haddad family figured he would become a dentist, since there was a line of them in the family tree on his mother's side. So, when the time came he went off to Presbyterian College in Clinton, S.C. and earned a B.S. in biology.

"I interned with a dentist my sophomore year, and that's when I decided not to become a dentist," he said. "It was boring to me. Then I took a five-week course in tropical biology in Puerto Rico and the Virgin Islands, and that's when I knew what I wanted to do."

Haddad then went on to the University of South Florida at St. Petersburg to earn his masters degree in marine science. That's where he met Sharon, who worked in the library. She eventually became his wife.

He did his graduate work on red tide, oceanography and marine botany, working under Dr. Karen Steidinger, a world-renowned authority on red tide.

"We worked off the West Coast of Florida, mapping and monitoring red tide blooms," Haddad said. "We mapped habitats from aircraft. We were the first team to map all coastal habitats in Florida, including estuaries, and we studied seagrass use by juvenile fish."

Eventually, his hard work moved him through the ranks at the then-Florida Marine Research Institute, which became the Fish and Wildlife Research Institute and on to the FWC's Office of the Executive Director.

Now, it's all winding down – no more 10-hour workdays or working weekends and nights.

"There will be time now to catch up on some of the things I wanted to do," he said.

Now he'll take some time to take some day-rides and maybe a little cross-country trip now and then on his two Harleys – a Road King and a Soft Tail custom. Haddad and his wife also have three horses for trail riding and mounted fox-hunting.

"I plan to do more hunting, too," he said. "I plan to stay active in conservation. I'll continue to serve on the Board of Directors of the Wildlife Foundation of Florida and stay connected to fish and wildlife conservation causes, but I am retiring from science."

Haddad and his wife plan to reside in the Tallahassee area but will spend some time at their second home in North Carolina.

Meanwhile, he will look back on his career with the FWC and draw satisfaction from his accomplishments in putting the agency in a position to promote decisions based on the best science available and promoting public support for the tough decisions the agency has to make every day.

New programs, such as the Wildlife Legacy Initiative – to keep common species common – and imperiled species plans that are working and habitat and species inroads the FWC has pioneered are some of the reflections that will come to him as he enters a new phase of his life – a phase that will allow some think time. That's something that has been rare during the past 7 1/2 years.

FWC Assistant Executive Director Nick Wiley will take over the executive director's post on New Year's Day. FW

FWRI FILES

St. Marks National Wildlife Refuge

a naturalist's wonderland

Article and photographs by Lazaro Aleman

The wildlife in St. Marks National Wildlife Refuge is not incidental or without reason, as the most casual of visits will attest. Indeed, a visitor doesn't have to leave the seven miles of paved road that lead to the historic St. Marks Lighthouse on Apalachee Bay to see songbirds and waterfowl, and sometimes even deer, alligators and other wild creatures. But to truly appreciate the refuge's wildlife offerings, plus experience Florida's beauty at its most natural and elemental, it's essential to abandon the car and take to one of this unique habitat's more than 75 miles of foot, bicycle and/or horse trails.

Like many who often travel great distances to see faraway places, yet fail to appreciate the wonders of their own backyards, I largely ignored the St. Marks for years; its very proximity a deterrent. Acute disappointment with the offerings of a faraway wildlife sanctuary I visited at great expense and inconvenience prompted me to look closer to home. Imagine my surprise and delight when the St. Marks proved to be the jewel I had expected the other to be.

Typically, my few brief excursions into the St. Marks in the past had been confined to the lighthouse and its vicinity. The 1832-built and still operating tower is beautiful and a worthy destination on its own, and its surroundings offer many wildlife viewing opportunities. The lighthouse is the refuge's most visited site, according to the U.S. Fish and Wildlife Service. But impressive as the lighthouse and bay are, they represent only a fraction of the cultural, historical and natural richness that make this 68,000-acre ecosystem, just 25 miles south of Tallahassee in the Florida Panhandle, a national treasure.

The St. Marks annually attracts upwards of 250,000 visitors, including bird watchers, photographers, hikers, picnickers and just plain nature lovers. Its establishment as wintering habitat for migratory birds since 1931, moreover, makes it one of the oldest wildlife sanctuaries in the country and a veritable "Mecca for birders." Bear, if you will, with the impressions of a fresh convert.

My "discovery" of the St. Marks (Spanish explorers first came on the scene in the late 1500s, and Native Americans inhabited the area for thousands of years earlier), occurred in winter, which turns out is an optimum time for visiting, in terms of temperatures, absence of insects and wildlife viewing opportunities, especially of migratory birds. Spring and fall also are good times.

My first wildlife encounter on this particular morning occurred just inside the refuge's boundaries, when a half dozen or so deer crossed the road just ahead of my car and momentarily froze in the dappled shadows of the roadside thickets before drifting deeper into the woods. A little farther on, a large otter waddled across the road, slipped down an embankment, and disappeared into the watery underbrush before I could reach my camera. By then I was alert and alerted.

I parked the car at a nearby trailhead (one of several off the

Alligators and white-tailed deer are only a few of the species of wildlife that call the St. Marks National Wildlife Refuge home.

Above: *A small cabbage palm almost conceals a raccoon.* ***Below:*** *A snowy egret (bottom left) forages along with a flock of white ibises.*

roadside), and started down a well-defined path that, as it turns out, links with others to form a 12-mile loop of sorts that traverses long stretches of freshwater and saltwater marsh.

My first spotting of an alligator was an unexpected treat, although I must admit by the 29th, when I stopped counting, they had become almost commonplace. Redwing blackbirds were abundant, as well as great and snowy egrets, great blue herons, American coots and wood ducks, and countless other species.

At one point, a large white-tailed buck and I stood transfixed for several minutes, observing each other across the span of a short distance, before he broke and bounded away. At another, a partially concealed raccoon atop a small cabbage palm and I stood almost eyeball-to-eyeball, examining each other. And near the woods, a wild boar and piglets crossed the trail ahead.

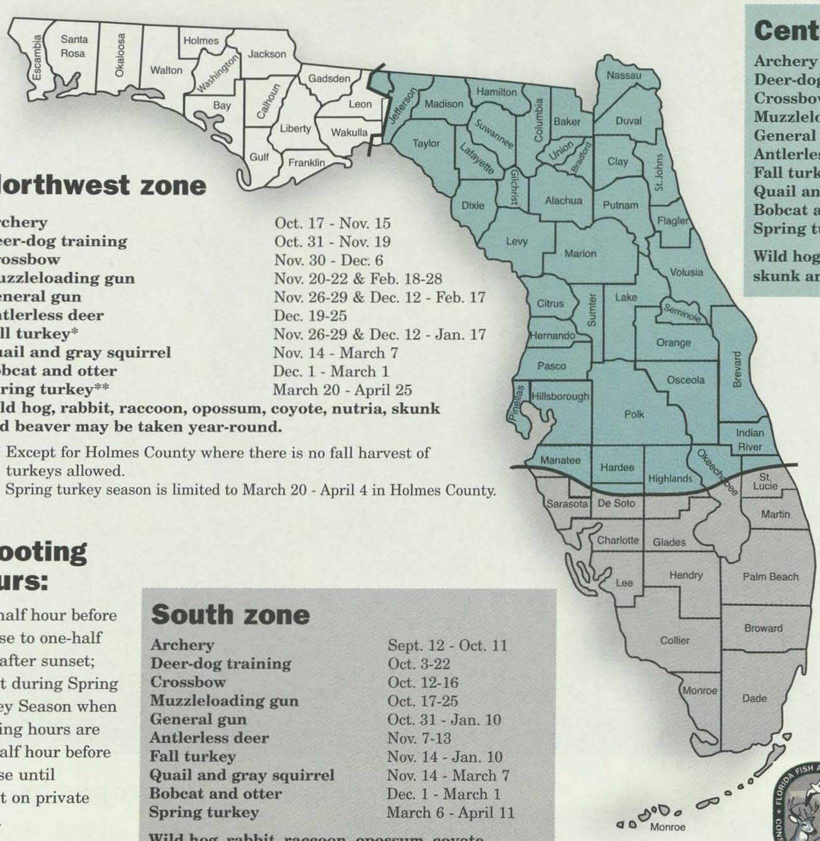
By now, all sights and sounds of humankind activity had ceased, making for almost absolute silence and solitude. I heard only the chirps of birds, the rustle of cabbage palms and the doleful calls of faraway mourning doves. Around me stretched a vast expanse of winter-browned marshland, populated near and far with hundreds of water birds, all under an ethereal blue sky with a pale half moon just above the western horizon.

Every now and then, a fleck or flecks of white would flutter across the great vista and drop as an egret or other white-feathered bird or birds sought a better feeding or resting place. Wary ducks and herons nearer the shore would take flight at my approach, the first lifting rapidly or running across the water before becoming airborne, the second rising slowly and gracefully. Once, a score or more of black-wingtip white ibises poured out of the nearby woods and passed directly overhead headed for the shallow pools.

The trail eventually led into a great expanse of tidal marshland with numerous intersecting creeks and an occasional cabbage palm or oak. Far as the eye could see, to the far-flung horizons, stretched a tawny sea of grass, interrupted here and there by a sparkling ribbon of water or a dark green clump of vegetation, the lighthouse a mere white speck in the hazy distance. I saw otters and crabs in the water, kingfishers on the wing, and plenty of tracks and scatological evidence attesting to much nocturnal activity.

Another mile or so, and I turned back, my curiosity momentarily satisfied, if not whetted for the long term. I had no doubt that I would return time and time again, to catch the refuge's different phases – spring, summer and fall. Sealing that commitment, I stopped at the visitor's center on the way out and purchased an annual permit, the ticket to unlimited access into the refuge. FW

2009-2010 FLORIDA HUNTING SEASONS



Central zone

Archery	Sept. 26 - Oct. 25
Deer-dog training	Oct. 3-22
Crossbow	Oct. 26-30
Muzzleloading gun	Oct. 31 - Nov. 8
General gun	Nov. 14 - Jan. 24
Antlerless deer	Nov. 21-27
Fall turkey	Nov. 14 - Jan. 10
Quail and gray squirrel	Nov. 14 - March 7
Bobcat and otter	Dec. 1 - March 1
Spring turkey	March 20 - April 25

Wild hog, rabbit, raccoon, opossum, coyote, nutria, skunk and beaver may be taken year-round.

Northwest zone

Archery	Oct. 17 - Nov. 15
Deer-dog training	Oct. 31 - Nov. 19
Crossbow	Nov. 30 - Dec. 6
Muzzleloading gun	Nov. 20-22 & Feb. 18-28
General gun	Nov. 26-29 & Dec. 12 - Feb. 17
Antlerless deer	Dec. 19-25
Fall turkey*	Nov. 26-29 & Dec. 12 - Jan. 17
Quail and gray squirrel	Nov. 14 - March 7
Bobcat and otter	Dec. 1 - March 1
Spring turkey**	March 20 - April 25

Wild hog, rabbit, raccoon, opossum, coyote, nutria, skunk and beaver may be taken year-round.

* Except for Holmes County where there is no fall harvest of turkeys allowed.

** Spring turkey season is limited to March 20 - April 4 in Holmes County.

Shooting hours:

One-half hour before sunrise to one-half hour after sunset; except during Spring Turkey Season when shooting hours are one-half hour before sunrise until sunset on private lands.

South zone

Archery	Sept. 12 - Oct. 11
Deer-dog training	Oct. 3-22
Crossbow	Oct. 12-16
Muzzleloading gun	Oct. 17-25
General gun	Oct. 31 - Jan. 10
Antlerless deer	Nov. 7-13
Fall turkey	Nov. 14 - Jan. 10
Quail and gray squirrel	Nov. 14 - March 7
Bobcat and otter	Dec. 1 - March 1
Spring turkey	March 6 - April 11

Wild hog, rabbit, raccoon, opossum, coyote, nutria, skunk and beaver may be taken year-round.

Seasons and dates are not applicable on wildlife management areas.

The *2009-10 Florida Hunting Regulations* handbook and wildlife management area brochures are available at county tax collectors' offices, Florida Fish and Wildlife Conservation Commission regional offices and online at MyFWC.com/Hunting.

Florida Fish and Wildlife Conservation Commission

MyFWC.com

MIGRATORY GAME BIRD SEASONS

Shooting hours:

- Migratory game birds: one-half hour before sunrise to sunset
- Dove during the first phase: noon to sunset
- Dove during the second and third phase: one-half hour before sunrise to sunset
- Crow: one-half hour before sunrise to one-half hour after sunset

Species	Season dates	Daily bag limits	Possession limits
Crow	Aug. 8 - Oct. 25 *(Sat. & Sun. only)* Nov. 11 - Feb. 18	No limit	No limit
Rail and common moorhen:	Sept. 1 - Nov. 9		
King and clapper rails		15	30 singly or in aggregate
Sora and Virginia rails		25	25 singly or in aggregate
Common moorhen		15	30
September Canada goose*	Sept. 5-30	5	10
Special early duck	Sept. 26-30	4**	8**
Mourning and white-winged dove	Oct. 3-26 Nov. 14-29 Dec. 12 - Jan. 10	15***	30 singly or in aggregate***
Snipe	Nov. 1 - Feb. 15	8	16
Canada goose*	Nov. 21-29 Dec. 1 - Jan. 30	5	10
Waterfowl and coot	Nov. 21-29 Dec. 12 - Jan. 31	6 ducks**** 15 coots 5 mergansers*****	12 30 10*****
Youth Waterfowl Days	Feb. 6-7	Same as waterfowl and coot season	Same as waterfowl and coot season
Snow, blue and Ross' geese	Nov. 21-29 Dec. 12 - Jan. 31	15	No limit
Woodcock	Dec. 19 - Jan. 17	3	6

* Season now open statewide.

** Bag/possession limits are 4/8 teal and wood ducks, no more than 2/4 of which may be wood ducks.

*** Bag/possession limits increased from previous year to 15/30 mourning and white-winged doves, singly or in aggregate.

**** Six duck limit shall consist of no more than 4 mallards (no more than 2 of which may be female); 1 black duck; 1 mottled duck (Florida duck); 1 fulvous whistling-duck; 1 pintail; 1 canvasback; 2 redheads; 2 scaup; 3 wood ducks; and 4 scoters. All other species of duck (except harlequin) may be taken up to the six duck daily limit. Taking or attempting to take brant or harlequin ducks is prohibited.

***** Bag/possession limits are 5/10 mergansers, no more than 2/4 of which may be hooded.

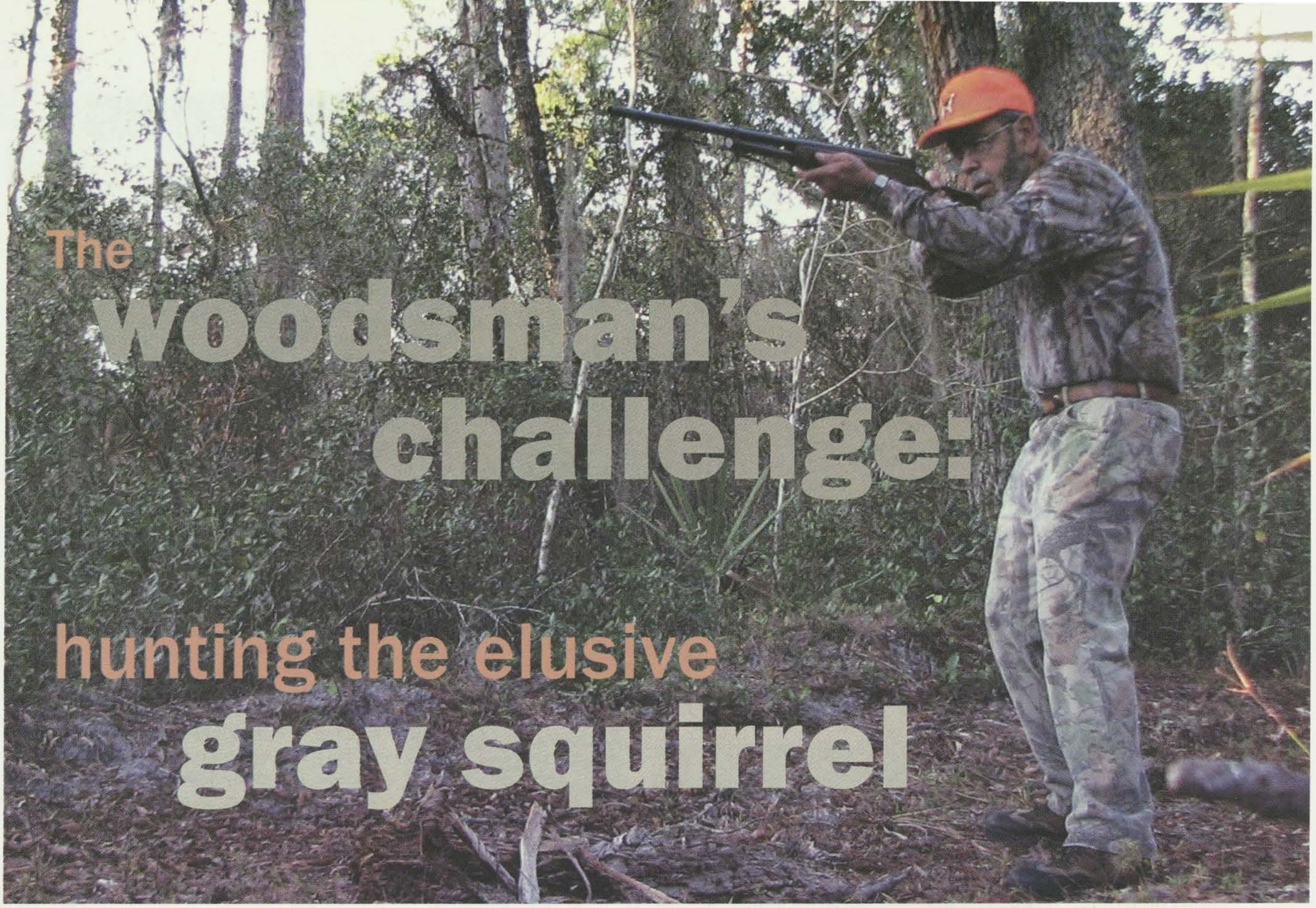
Wildlife Alert!

Report fish and wildlife law violators

Those who violate Florida's fish and wildlife laws are stealing from us all. Obey the law to ensure that fish and wildlife resources can be enjoyed by future generations.

Do your part by reporting violations to a local FWC law enforcement office by calling **888-404-FWCC (3922) or #FWC and *FWC from a cellular phone. To report online, visit MyFWC.com/law/alert.**

You may be eligible for a cash reward and can remain anonymous.



The woodsman's challenge: hunting the elusive gray squirrel

Article and photographs by Tom Rose

When Tennessee Ernie Ford recorded his No. 1 hit in 1951, squirrel hunting was a big deal. While things were going pretty well in the United States at the time, memories of the pre-war depression and WW II rationing were not so distant. It just made sense that if the sportsman could enjoy a day in the woods and put a little meat in the pot, it was a win/win deal for family budget and the dinner table as well. There were lots of squirrel hunters back then, from both rural areas and cities.

As a young boy growing up in the 1950s, my greatest joy came from the times my dad or older brother took me squirrel hunting. They taught me respect for the woods and the game. I learned gun safety, patience, conservation and the ways of the outdoorsman, such as how to move quietly through the woods. I learned never to shoot an animal I didn't intend to eat. This early introduction to the woods and hunting has carried over throughout my lifetime, providing many hours of outdoors adventure and enjoyment.

These days, it is not easy to find a squirrel hunter. I don't know why. But I should not complain. Those good spots that would have been "hunted out" towards the end of the season in the old days now have plenty of game from the beginning to the end. It is still one of the greatest and simplest ways to enjoy a day in the woods and come home with a reward that will be a delicious meal. It is easy to grab your shotgun or .22 rifle, a pocketful of shells and head into the woods for a squirrel hunt. You don't need to belong to an expensive hunt club. Most of us live an hour's drive, or less from public land that is open to hunting. Hunting season in Florida (squirrel and other small game)

"Well, over on the ridge
is a scaly bark
Hick'er nuts so big you can
see 'em in the dark
The big fat squirrels
they scratch and they bite
I'll be on that ridge
before daylight -
Shot-gun Boogie
all I need is one shot...
Look out bushy tail,
tonight you'll be in the pot."

From Tennessee Ernie Ford's
1951 No. 1 hit song,
"Shot-gun Boogie"

small game) typically runs from mid-November through March 1, almost four months.

I am fortunate to live just south of the Ocala National Forest in Umatilla. The forest provides me with almost unlimited opportunities for hunting. My favorite time is after deer season closes in mid-January. I have the whole 383,000 acres of the forest almost to myself.

You can hunt squirrels at any daylight hour, but usually early morning and late evening provide the best results. My choice is to slip into a pre-scouted spot just before daybreak. Look for an oak hammock with large oaks and some pine trees. Acorns and pinecones are a staple of the squirrel diet. If squirrels are there, you should see partially eaten acorns and pinecones scattered about.

The deep-woods gray squirrel is a different animal than its city cousin. Take a walk through a city park with dozens of squirrels scampering about, and you have to wonder what sport it could be to hunt these playful little creatures. However, you can stroll through several acres of forest where hundreds of squirrels may live, and yet never see one. They present a real sporting challenge to the hunter. The forest squirrel is instinctively wary of predators, natural enemies like the eagle, hawk, bobcat, fox and the hunter. Unusual sounds or movement in the woods will keep them in hiding for hours.

There are two ways to hunt the wily little creatures. Ease into a pre-selected oak hammock at sunrise, find a fairly comfortable stump or log, sit down and wait. This is known as "still hunting." Search the branches for movement. Your patience will pay off. It may take an hour or an hour and a half, but if you remain quiet and fairly still, the squirrels will come out.

I wait until I see two or three on the move. Then, I plan my shots to get as many as possible as quickly as possible. Once you break the silence with a shot, it will be another hour or so before any squirrels in the area will again be on the move. But, if you are patient they will come out again.

The other method is walking the woods, slowly walking. If you are going to walk, it is best to do so on a dirt road, trail or fire lane. If you are just walking through woods, you will probably be unable to move quietly enough. Take a few steps, then a long pause. Carefully search the trees and branches for any sign of movement. A windless day is best, because if the wind is blowing, it is almost impossible to spot a squirrel among all the moving branches, leaves and moss.

With a little practice and attention to the basics, you can be a successful squirrel hunter. And if you are successful at hunting squirrel, you qualify as a real woodsman and conservationist.

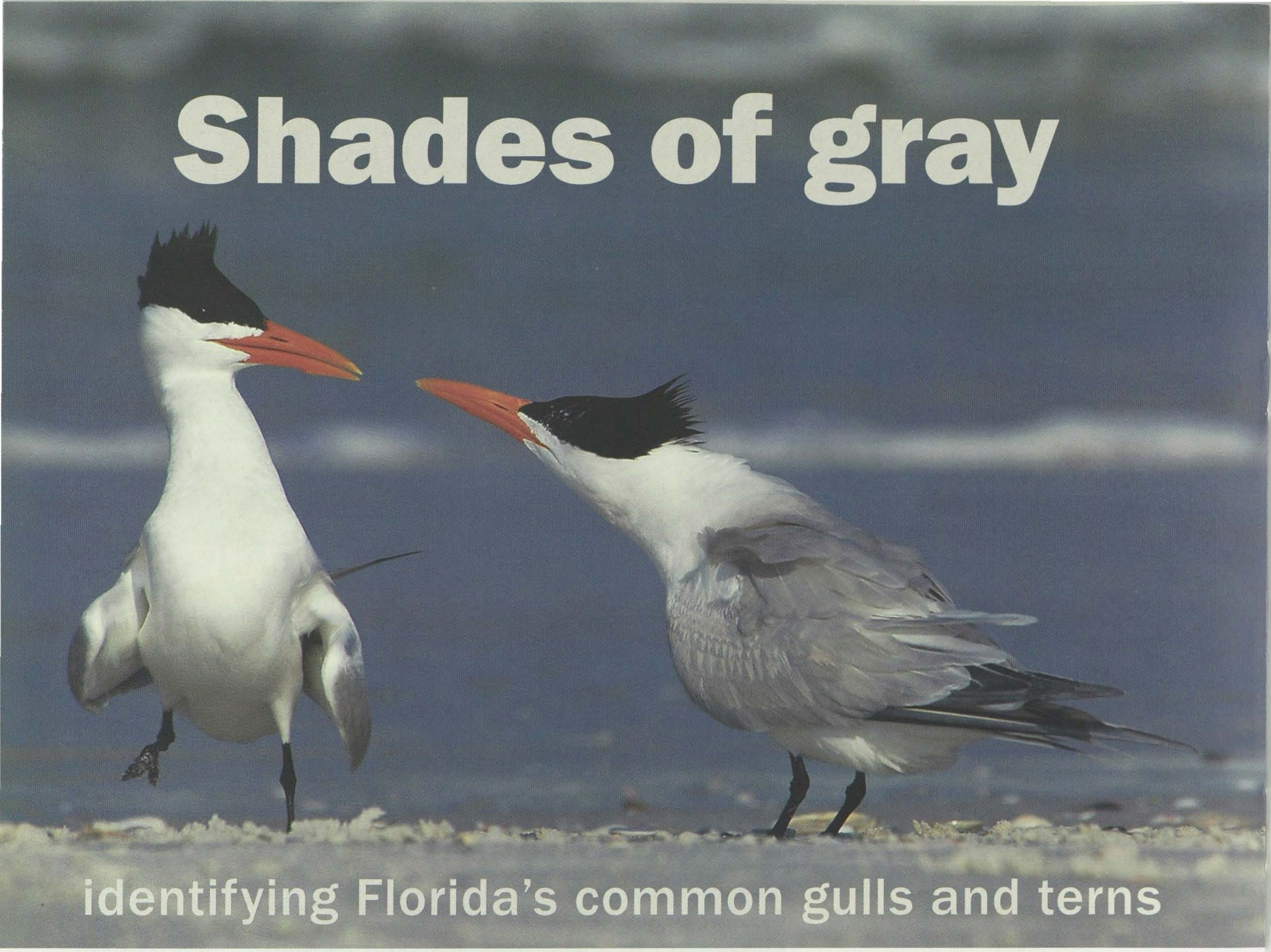
Your reward is the satisfaction of a day in the woods with nature and a meal fit for a king.

In his *Bull Cook and Authentic Historical Recipes and Practices* (George Leonard Herter and Berthe E. Herter, 1961) George Herter writes, "There are few people I have talked to who know something about eating that do not rate squirrel at the top of the list when it comes to eating wild animals. Squirrel meat is light colored, fine textured, with a delicate flavor. Squirrel meat is far superior to venison or moose and you do not tire of it as easily as you do such meats when you have it for a more or less steady diet."

So there you have it, squirrel hunting, one of the best excuses I know to take a walk in the woods. FW

A squirrel can see you far better than you can see it. You must be still, quiet and patient to get a clear shot at old bushy tail.

Shades of gray



identifying Florida's common gulls and terns

By Selena Kiser

Most of us are familiar with gulls and terns, as they frequent Florida's beaches and inland lakes and marshes throughout the year. Gulls and terns belong to the group of birds known as shorebirds (order *Charadriiformes*), but they look quite different from other shorebirds, such as sandpipers and plovers. Gulls, along with the closely related terns and skimmers, belong to the family *Laridae*.

So, what are the differences between gulls and terns anyway? To a beginner, all those birds sitting on the beach may look very similar with their plumages of black, white and various shades of gray. However, as you begin spending time looking at certain traits, it becomes easier to tell the two groups apart. Some of the best characteristics to pay attention to are the legs, bills, overall shape and the way they feed.

Gulls tend to be larger overall, more heavy-bodied in appearance and tend to stand taller and more upright than terns. Gulls have longer legs and necks than terns, and their bills have a small hook at the end. Terns, on the other hand, have pointed bills, and their short legs and necks make them appear squatter than gulls when standing on the beach. However, when flying, terns are much more graceful, as they have longer, slimmer and pointier wings than gulls. Most terns also have a forked tail that is prominent in flight. Gulls tend to have rounded or blunt tails.

Gulls and terns employ different feeding strategies to catch prey. Gulls are generalists and eat a wide variety of items. They often eat dead creatures on the beach, or catch prey on the surface of the water or along the shoreline. They also will steal prey, such as fish, from pelicans, terns and other gulls. Unfortunately, gulls also beg for handouts from people (although it is best not to hand-feed any wildlife). They often rummage through garbage at landfills, looking for food scraps.

Unlike gulls, terns do not scavenge for meals. Instead, they typically use a plunge-dive technique to catch live fish. They hover high above the water's surface and plunge beak-first, similar in fashion to a brown pelican. Their streamlined bodies help them when diving. Live fish make up most terns' diets, although a few species eat insects. You might see terns carrying small fish in their beaks, while calling excitedly to let their mate or young know they have caught a meal.

Now that you can tell gulls and terns apart, the next step is to identify species. This becomes a bit more challenging. The hardest part about identifying gulls and terns is that many look quite different between their summer and winter plumages (They molt twice a year and are more colorful during the breeding season than the winter.) Worse yet is that gulls also undergo a substantial change in plumage between immature and adult stages. Depending on the species, Florida's gulls may take from two to four years to reach adulthood, and they look different every year. Even advanced birders have difficulty identifying some species of gulls. Learning all of these different plumages can be overwhelming, so start with the easier-to-identify adults and take it from there. Terns typically are not as hard to identify as gulls. However, there are some tern species in Florida that are very similar, and at certain times, separating them can be challenging as well.

Although 19 species of gulls (and related kittiwakes) have been recorded in Florida, the five you are most likely to see are the laughing gull, ring-billed gull, herring gull, great black-backed gull and Bonaparte's gull. Of these species, only the laughing gull breeds in Florida and is common year-round. The rest of these gulls occur from fall to spring. Even so, you may run across an occasional herring or ring-billed gull during the summer.

Terns, on the other hand, are found throughout the year in Florida, as many of them raise young and winter here. There are 15 species of terns (and related noddies) known in Florida, but the five species you're most likely to observe are the Forster's tern, royal tern, least tern, sandwich tern and Caspian tern. Of these species, the only tern that isn't found in the winter is the least tern. Each of these terns breeds in Florida, except Forster's tern.

Learning about gulls and terns will bring a newfound appreciation for them. For more information about each species, including photos, range map and vocalizations, pick up a good field guide, or visit www.allaboutbirds.org. Type the species name in the online bird guide, and you will discover all sorts of fascinating facts. The next time you go to the beach, take a closer look and see if you can distinguish some of Florida's gulls and terns. FW

LARRY LYNCH

Spread the word

MAXIS GAMEZ/GVISIONS.ORG

There are many threats to shorebirds, such as habitat loss and pollution. Please do not add to these threats by disturbing them, especially during the summer when terns, plovers, skimmers and other shorebirds are breeding. Roped-off areas closed during the nesting season should be avoided. In particular, do not allow your dogs to run free on beaches, except on designated dog beaches. Some beaches, such as those in state parks, do not allow pets at all, so please respect the regulations and keep Fido at home. Lastly, if you see a group of shorebirds on the beach, please walk around them. Like humans, shorebirds can get tired, and they need time to rest after foraging, especially during migration. This can be particularly important when the tide comes in and there are fewer places to rest. If birds start to move away and fly off, you are too close. Many people don't realize that forcing shorebirds to fly puts additional stress on them. Spread the word, and if you see someone disturbing nesting bird colonies, please contact the FWC at 888-404-FWCC.

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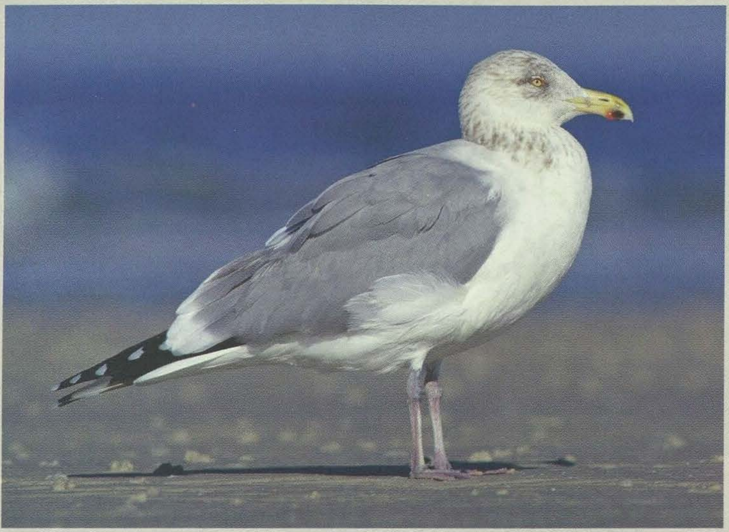
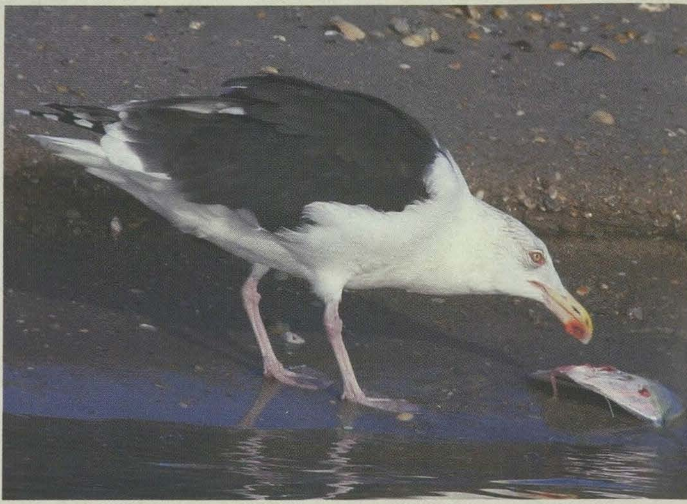
Above: *Least terns, as well as other shorebirds, lay their eggs and raise their young directly on Florida's beaches.* **Facing page:** *A pair of royal terns engage in a courtship dance.*



JACK ROGERS

Herring gull

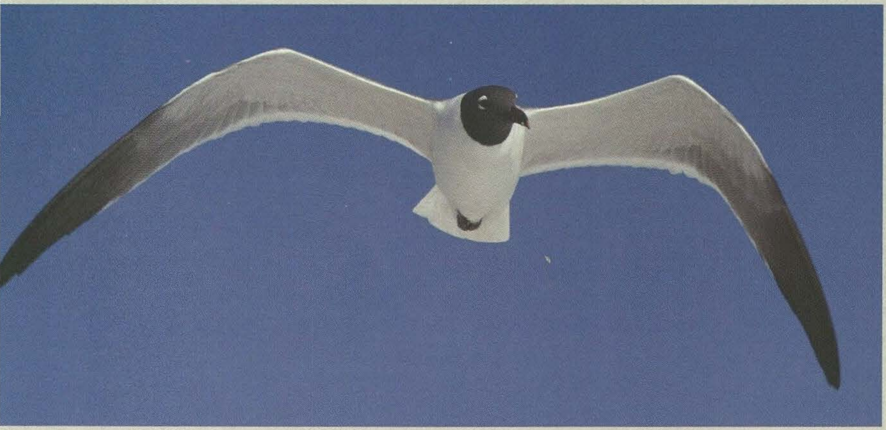
- Common fall to spring
- Large gull (25 inches)
- White head (some gray streaks in winter)
- Yellow bill with red dot
- Light pink legs
- Medium gray on back



DANNY BALES

Great black-backed gull

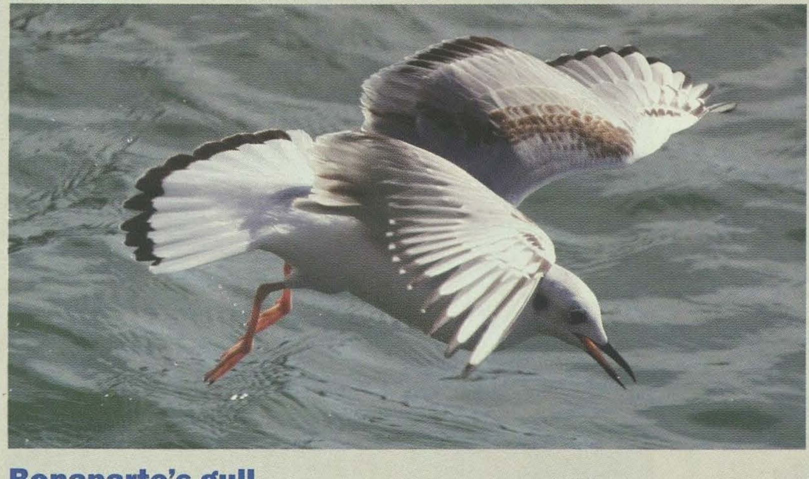
- Fairly common in winter
- Largest gull (30 inches)
- White head (few gray streaks in winter)
- Yellow bill with red dot
- Light pinkish legs
- Very dark gray to nearly black on back



MITCH MCCONNELL

Laughing gull

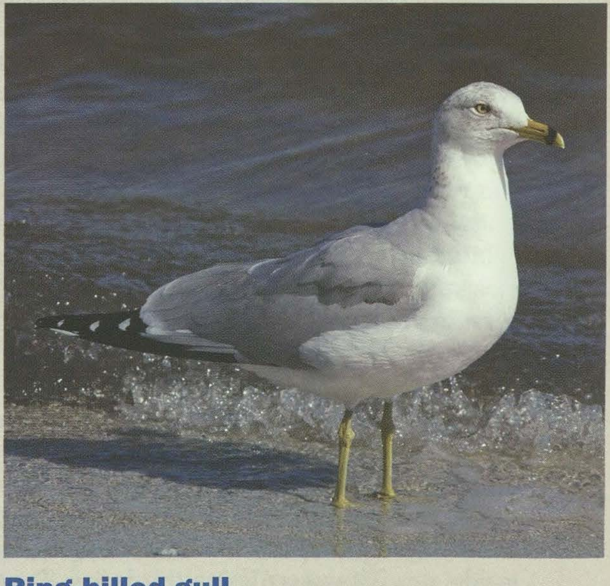
- Very common year-round
- Only breeding gull in Florida
- Medium-sized gull (16.5-17 inches)
- In summer, black head with white markings around eyes; in winter, mostly white head with some gray markings
- Red to reddish-black bill in summer; black in winter
- Black legs (reddish in summer)
- Dark gray on back



DANNY BALES

Bonaparte's gull

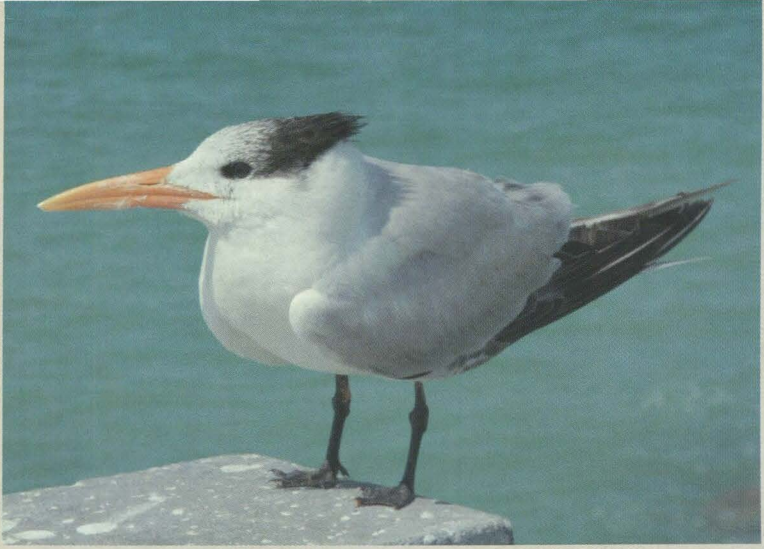
- Fairly common in winter
- Small gull (13-13.5 inches)
- Whitish head with black spot behind eye (ear spot) in winter
- Black bill
- Orange-pink legs
- Medium-dark gray on back



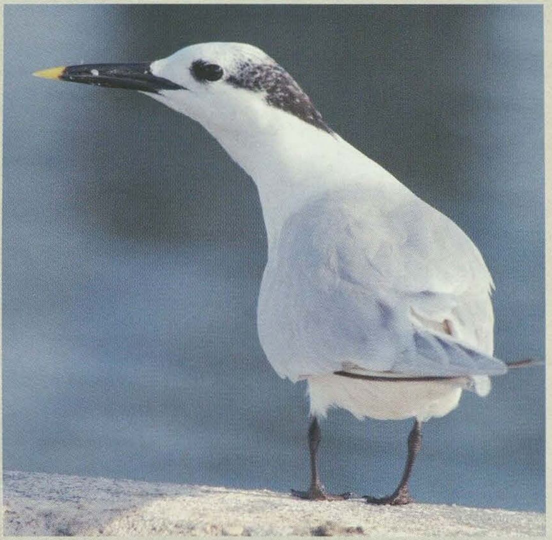
THOMAS J. DUNKERTON

Ring-billed gull

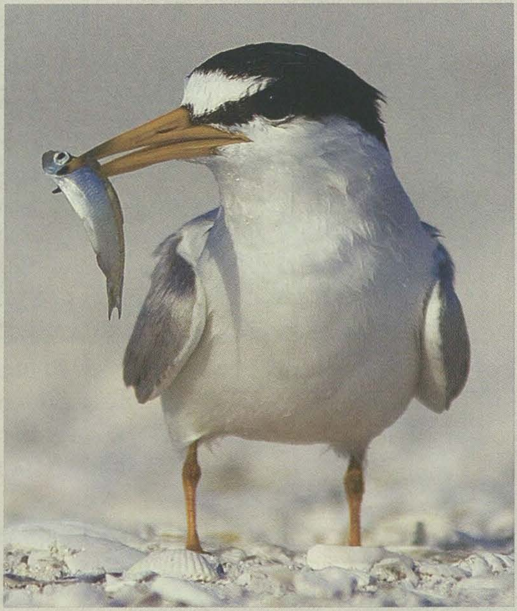
- Very common fall to spring
- Medium-sized gull (17.5-19 inches)
- White head (some gray streaks in winter)
- Yellow bill with black "ring"
- Yellow legs
- Medium gray on back


MARK KISER

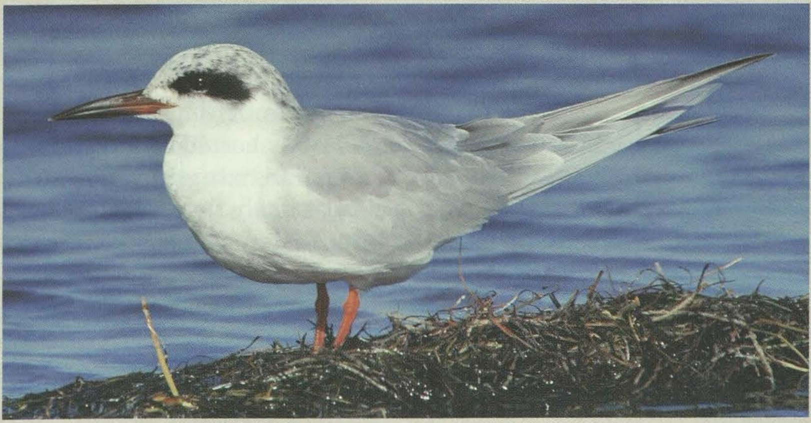
Royal tern
- Common year-round
- Large tern (20 inches)
- Black cap in summer; black nape with white forehead in winter
- Orange bill
- Black legs
- Medium gray on back


TRAVIS BLUNDEN

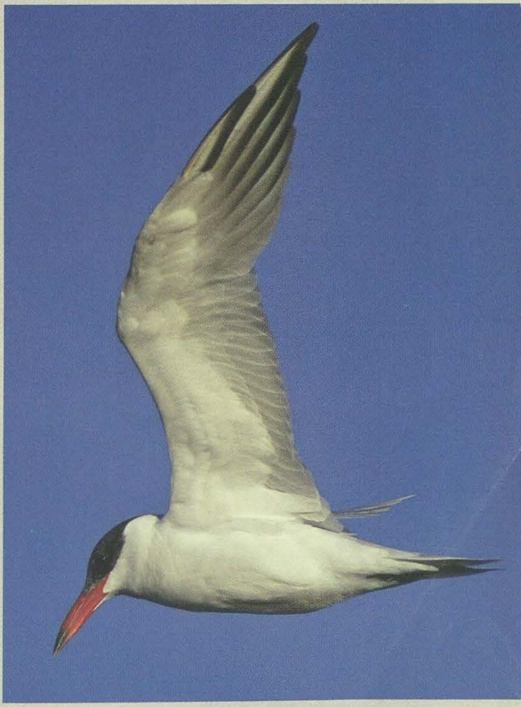
Sandwich tern
- Fairly common year-round
- Medium-sized tern (15 inches)
- Black cap in summer; black nape with white forehead in winter
- Black bill with pale yellowish tip
- Black legs
- Medium gray on back


MARINA SCARR

Least tern
- Common in spring and summer
- Smallest tern (8.5-9 inches)
- Black cap, white triangle on forehead (in summer)
- Yellow bill in summer
- Yellow legs
- Medium gray on back


THOMAS J. DUNKERTON

Forster's tern
- Common from fall to spring
- Only common tern that does not breed in Florida
- Medium-sized tern (13-14.5 inches)
- Black cap in summer; white head with black patch around and behind eye in winter
- Orange bill tipped in black in summer; black bill in winter
- Orange legs
- Medium gray on back


JACK ROGERS

Caspian tern
- Fairly common year-round
- Large tern (21 inches)
- Black cap in summer; black and white streaked in winter
- Red bill with dark tip
- Black legs
- Medium gray on back

Working to bring back Gulf-strain stripers

JOHN N. FELSHER

By John N. Felsher

The Gulf-strain of striped bass once flourished from Florida to southeastern Louisiana, but few still occur naturally. In nature, stripers spend most of their lives in salt water, but enter freshwater rivers to spawn. Their eggs must tumble, suspended in the current at a certain temperature for a time, in order to grow.

"The only reproducing Gulf population is in the Apalachicola-Chattahoochee-Flint river system, and successful reproduction has only been documented in the Flint River. While we find natural fish in the Apalachicola River, it is most likely they migrated downstream from the Flint River," said David Yeager, a Florida Fish and Wildlife Conservation Commission biologist. "Some Gulf genes are still around. We are trying to re-establish populations, but there really isn't a good population anywhere on the Gulf Coast."

While the Apalachicola contains the largest native population, the FWC supplements the lower Ochlockonee River population with stocked fish. A dam across the Apalachicola creates Lake Seminole, a 37,500-acre impoundment on the Florida-Georgia state line, which contains a good striper population, plus hybrids (also called sunshine bass) that are an artificial cross between white bass and stripers.

Above: *David Sikes admires a striped bass he caught.* ***Facing page, top to bottom:*** *Daniel Felsher prepares to release a striped bass he caught; a striped bass is brought to the boat after taking a bait; Russell Bergantino shows off a hybrid striped bass he caught while fishing in Lake Seminole near Chattahoochee.*

"The hybrid fishery on Lake Seminole is unbelievable," said Matt Bergantino, a guide. "I've seen hundreds of fish schooling and hitting shad. It's awesome to see that many fish attacking bait. On Lake Seminole, hybrids average about 2 to 3 pounds, but we catch many 6- to 7-pound fish with some over 8 pounds. On some days, we caught 30 fish in two hours, and the smallest weighed 5 pounds. The biggest I've caught was about 9 pounds."

Bergantino prefers to use live shad for bait. He catches them in a cast net and watches for schooling activity along humps and creek channels. In the right spot, he tosses a few handfuls of shad into the water to get predators interested, then free-lines shad in the chummed area. In deeper water, he fishes a live shad on a Carolina rig.

"If stripers are not feeding, I give them an enticement by throwing some chum in the water," Bergantino said. "I like free-lining because the baitfish can swim more naturally with nothing holding it back. There's nothing like watching a shad trying to get away on the surface and, BAM!, a 10- to 15-pound striper nails it."

Anglers can catch stripers and hybrids from the dam to the delta. The river enters Apalachicola Bay through a vast estuary.

"Baitfish get in the river and find deep holes," said Chris Robinson of Robinson Brothers Guide Service in Apalachicola. "The lower end of the East River is a good place to fish. From the mouth of the Apalachicola to Lake Wimico is another good area. The overcast, nasty cold days are better for stripers, but hybrids bite under any conditions."

In the brackish estuaries, anglers looking for redfish, speckled trout and flounder often catch stripers and hybrids. Stripers might hit just about anything a redfish might hit, including lipless crankbaits, bucktail jigs, jerkbaits, soft plastics on jigheads and live bait.

Striped bass populations in the South, including along the Gulf Coast, are riverine fish and do not make ocean migrations liked striped bass in the Mid-Atlantic or along the Pacific Coast. However, a few stripers may move out into the Gulf, but they are the exception rather than the rule.

Stripers released into landlocked systems thrive, if they can find deep water, cool temperatures and abundant baitfish, mostly threadfin or gizzard shad. They can grow to more than 50 pounds. In landlocked systems, stripers may run up the rivers to spawn each spring, but natural reproduction is unable to maintain the population at levels desired by fish managers and anglers, so the populations are augmented by stocking.

Lake Talquin, near Quincy, probably holds the best landlocked striper population completely within Florida. Created in 1927 with a dam spanning the

JOHN N. FELSHER

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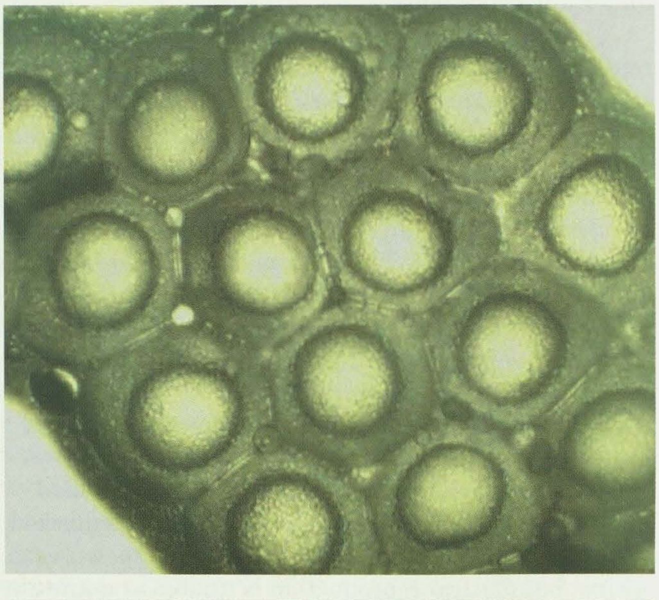
Ochlockonee River, the lake spreads through 10,000 acres west of Tallahassee. Named for a contraction of "Tallahassee" and "Quincy," Talquin holds some of the deepest water in Florida. Some holes in the old river channel drop to more than 40 feet. The FWC uses the lake to supply hatchery brood stock.

Talquin stripers generally run in the 10- to 20-pound range. Some exceed 30 pounds. Anglers often fish for them with chrome jigging spoons or by trolling deep-diving crankbaits near the dam or along the old river channel drops. Some people fish the Ochlockonee River below the dam. Some stripers may reproduce naturally in the tailrace below the dam.

"On Talquin, it's mainly a winter fishery," said Cliff (J.R.) Mundinger of Lake Talquin Trophy Guide Service. "Starting in mid-October, when the water temperatures dive below the mid-70s, stripers start schooling and chasing shad. On an overcast December day with little wind, we can chase stripers all over the lake and catch them with topwaters. In January and February, water gets really cold and stripers start migrating back into the creeks since the spring-fed creeks are a bit warmer."

When not chasing schools, Mundinger looks for large blips on his electronics or shad concentrations since hungry stripers won't stray far from threadfins. If shad sit 8 feet deep or less, he throws topwaters or shallow-running crankbaits. If shad stay deeper, he works over the area with a large crankbait, a jigging spoon or a 1/2-ounce Road Runner.

In eastern Florida, at the request of the FWC, the U.S. Fish and Wildlife Service stocks stripers in the



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Left, top to bottom: *FWC biologist David Yeager holds a 31-pound striped bass collected from the Blackwater River in March 2009; eggs are stripped from the 31-pound striped bass; striped bass eggs are incubated in McDonald hatching jars.* ***Above:*** *Striped bass eggs 10 hours prior to spawning.*

FWC FILES

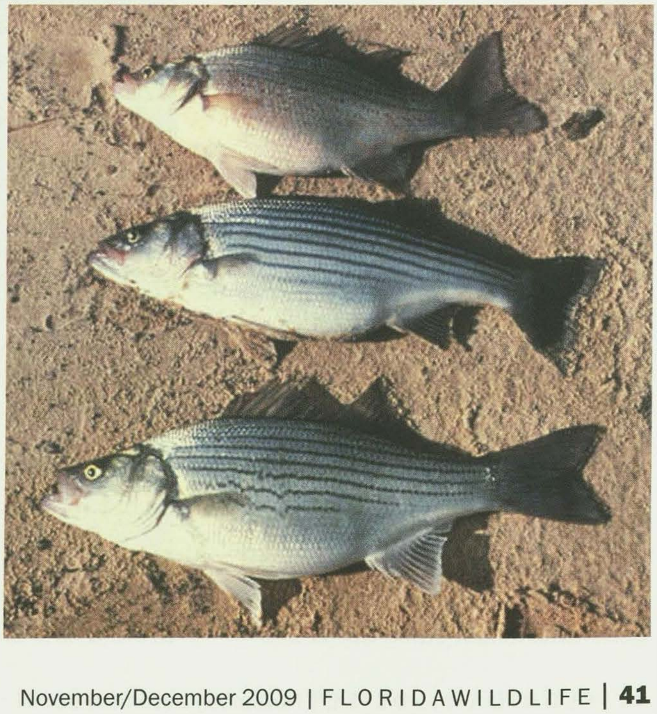
St. Johns River system each year. The best fishing occurs between Jacksonville and De Land. Some hot areas include Lake George, Salt Springs, the lower Oklawaha River, Buffalo Bluff and Green Cove Springs.

"On the St. Johns, striped bass occur pretty frequently downstream of Sanford, but few stripers occur above Sanford," said Rick Long, an FWC fisheries biologist. "The river doesn't receive any natural populations from the Atlantic. The striper population in the St. Johns system is entirely maintained by stocking. Some Atlantic-strain stripers reproduce on the St. Marys River."

Other striper waters include the Blackwater River, which can produce linesides up to 35 pounds, the Yellow and Escambia rivers, plus the Choctawhatchee River, which also contains sunshine bass. Some waters with hybrids include Eagle Lake, the Osborne and Ida Chain of Lakes and Lake Apopka.

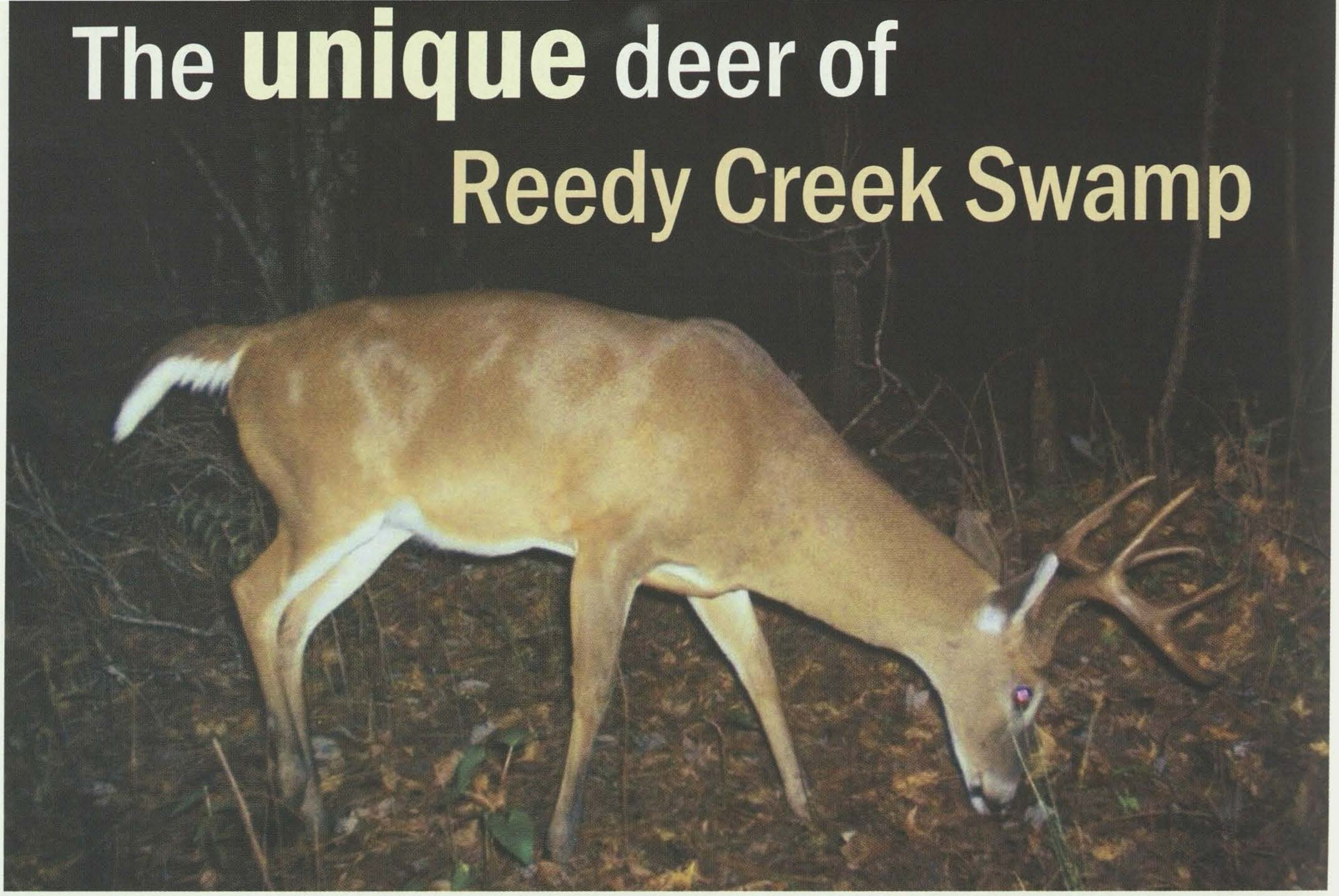
For booking trips, call Bergantino at 850-566-1737 or Mundinger at 850-567-8131. For Robinson, call 850-653-8896 or visit www.Floridaredfish.com. For food and lodging on Lake Talquin, call the Whippoorwill Sportsman's Lodge at 850-875-2605. FW

Below: Pictured top to bottom are a white bass, a striped bass and a hybrid striped bass (sunshine bass). Above: Hybrid striped bass between 8 and 10 inches grow in a hatchery pond.



FWC FILES

The unique deer of Reedy Creek Swamp



Article and photographs by Robert "Blue" Johnston

I've known for years the deer I've hunted in Reedy Creek, a part of the Green Swamp and Davenport Swamp drainage systems in the northwestern portion of Osceola County, are on a different rut cycle than the main deer population in Osceola County and Peninsular Florida. This particular part of the county is unique to Florida. Reedy Creek and the surrounding area is one of the largest watershed areas in Osceola County, and is filled with an abundance of wetland species along with a wide array of wildlife.

Few people, or hunters for that matter, have ventured into this massive wetland drainage area. Inside the outer tree canopy, that most people see only from the highway, are large stands of cypress trees that have gone untouched since the 1920s and '30s when Florida was in the middle of a great logging boom.

There's also a variety of water oaks scattered throughout the inside of this entire wetland area, along with endless runs of Florida cabbage palms. If you happen to venture in far enough, you will find some small and large islands, filled with palmettos along with huge laurels and live oaks. On some of these islands and along the edge of the creek, there are still traces of old Indian mounds. Ferns as high as your waist and shoulders shade most of the water-covered floor of the wetland, which makes a great home and hiding place for all sorts of wildlife, including white-tailed deer.

In past years, I have hunted with friends, including Florida crackers who have grown up around this creek area. We know the deer of this area have a very late rutting cycle. When hunting this creek area, we don't prepare for the "big boys" (larger bucks) until mid-to-late-December.

Through the years, I have heard stories about these whitetails. Several sources state the deer on this creek are offspring of deer brought into the area from Wisconsin in the late 1940s and early 1950s. One source said he knew of a hunter that shot one of them and found a Wisconsin tag in its ear. This might explain the rut cycle being so late. The imported deer's offspring have made an adjustment to this area by waiting on the cooler nights and days of December and January before beginning the rut. However, deer biologists say that recent scientific evidence suggests that genetics from released deer were not maintained in the population.

The same old crackers say the deer were transported into parts of Johnson Island, at the very south and western edge of the Reedy Creek Swamp and the eastern edge of the Huckleberry Islands (now known as Poinciana and the Disney Wilderness Preserve). One thing that would point to this theory being true is that these deer outweigh most of the other deer in Osceola County. The bucks easily can weigh from 150 to 200 pounds. I've talked with other hunters that have taken bucks that weighed in at more than 200 pounds. The hide and cape from these deer are darker in color, as are the antlers, which can be almost chocolate-brown. They are considered by hunters familiar with this area to be the most unique deer in Central Florida.

This past hunting season, I started a transition from hunter to photographer and record keeper. I've always enjoyed taking pictures of the natural, somewhat untouched areas of Florida, with all the wildlife and beauty found in these areas. But this past season, I decided to learn a little more about these four-legged animals that seem to know my every move when I enter their territory.

So, I began keeping a log of the rut and movements of these elusive, ghost-like creatures. In late November and early December, I began looking for scrapes and broken tree branches that overhang game trails and any area of heavily used trails, where camera setup can capture the slightest movement.

At my first setup area, I set my camera on a small freshly made scrape, 6 to 8 inches in diameter, at the intersection of two trails that were exiting the creek swamp. This was on Dec. 5. A week later, on Dec. 12, upon checking this camera, I found three different bucks had visited the same scrape, one of which was a very nice 8-pointer.

On Dec. 14, I found six more freshly-made scrapes in another area, along with new trees that had been rubbed and worked. This was an indication that the bucks were preparing for full rut in a few weeks. That same week, some of the does I had been watching were beginning a yearly ritual, with their tails sticking straight out, chasing each other and checking low-hanging branches, all prior to, or while coming into heat.

The week of Dec. 25, I had seven different bucks working two different scrapes where I had placed my trail cameras. In one of the same areas where I had previously counted six scrapes, the number of scrapes had grown, and was now up to 15, with each one being freshened the night before.

For the next two weeks – the first two weeks in January – the bucks were seen chasing does as they were more visable during daylight hours in search of the ladies in heat.

Entering the third week in January, I found the bucks still in rut. The trail camera I had at my original set-up area, still had five different bucks visiting and freshening up the scrape area. These scrapes had become 2-feet to 3-feet in diameter, which is about the same size as most of the 15 other scrapes I had found. During the whole cycle of rut, I also had pictures of does working these scrapes during daytime hours, the majority at early morning and night.

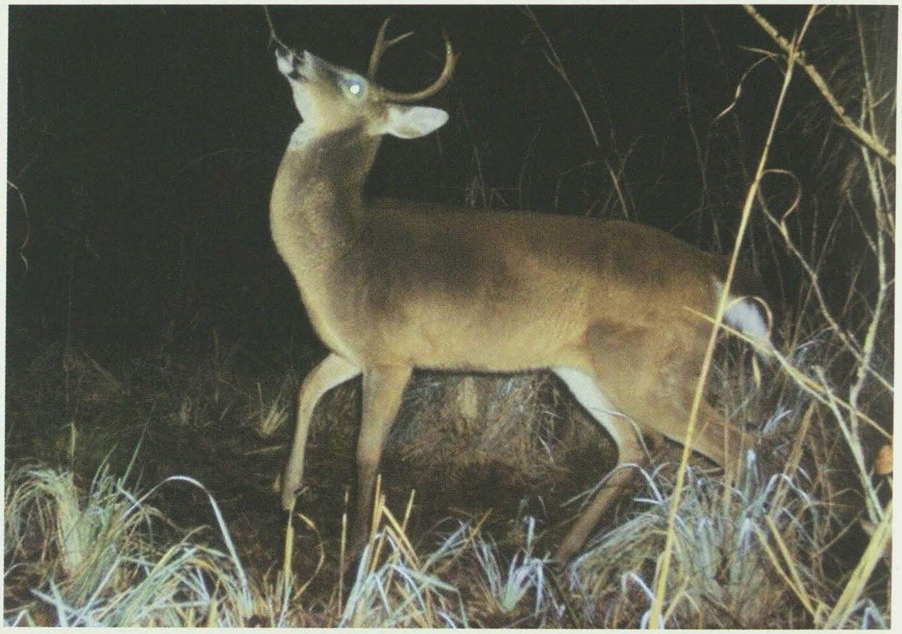
On Feb. 6, to my surprise, I still had five different bucks – mostly locals I had numerous pictures of – coming to the scrape where my camera had been since Dec. 5. One of the bucks was a non-local, and this was the first picture I had of him. This leads me to believe that after the local does are bred, bucks begin to seek out new territory. I'm sure this was happening during the entire rut, but most of the pictures I had were of the same bucks – a total of about 18 different ones – all working scrapes in a rotational cycle. It also appeared that one buck might start a scrape, but any other buck in the area would come check, scrape, rub and leave his scent at that same scrape.

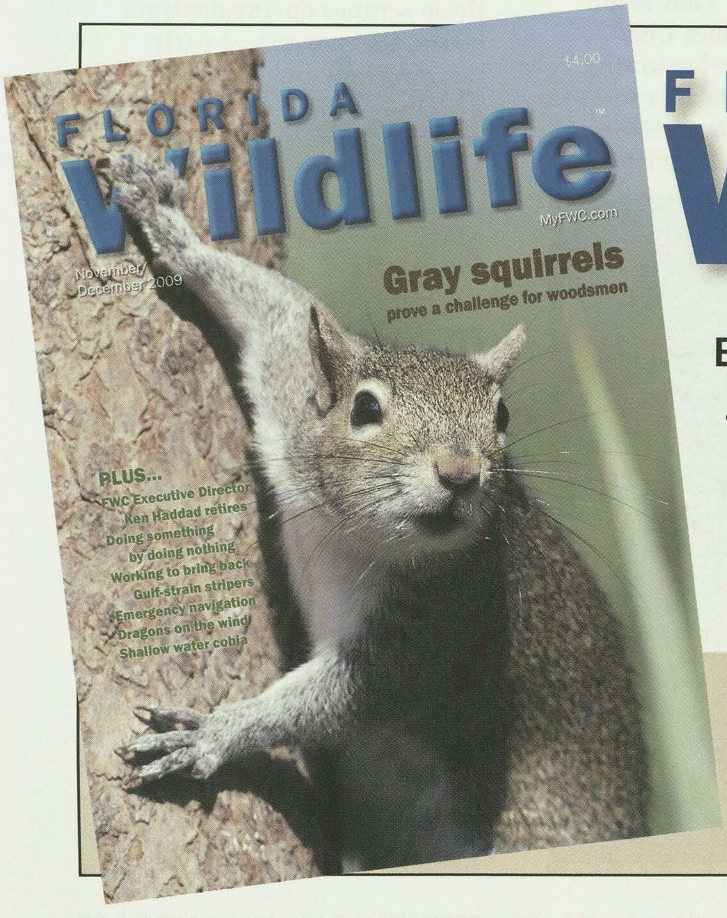
On Feb. 20, I was still watching and taking photos of bucks sparring and checking scrapes. In late March, bucks were seen chasing does by a number of turkey hunters in this area, and most of the older bucks still had their antlers.

I failed to mention that you can see pregnant does in July and August, and it is not uncommon to see spotted fawns in November and December.

During the entire hunting season, while in a stand, in a tree or just sitting in the woods, I keep a digital camera and a video camera ready for filming. I never know what may visit the scrapes. There could be a thrilling chase, or my heart might get pumping by watching two bucks sparring and pushing each other around. Or I might even see an old buck rubbing his body on the ground, like a dog does, trying to leave his scent. All of which make for a very exciting day in the outdoors.

The majority of hunters won't get to see what I have described, because they have what I call an "itchy finger on the trigger syndrome." But for some, there is a greater score that comes by applying a little patience, watching, listening and learning, all of which make for a more skilled woodsman and hunter. I was told years ago that you could learn something from everyone you meet. I believe that includes all of nature around us. So, I look forward to the coming years and spending more time learning about the elusive animal called the white-tailed deer. FW


In early February, different bucks were still visiting the scrape where the author had placed his camera in early December.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New report provides authoritative assessment of national, regional impacts of global climate change

A new report states that Americans are already being affected by climate change through extreme weather.

Climate change is already having visible impacts in the United States, and the choices we make now will determine the severity of its impacts in the future, according to a new and authoritative federal study assessing the current and anticipated domestic impacts of climate change.

The report, *"Global Climate Change Impacts in the United States,"* compiles years of scientific research and takes into account new data not available during the preparation of previous large national and global assessments. It was produced by a consortium of experts from 13 U.S. government science agencies and from several major universities and research institutes. With its production and review, spanning Republican and Democratic administrations, it offers a valuable, objective scientific consensus on how climate change is affecting — and may further affect — the United States.

"This new report integrates the most up-to-date scientific findings into a comprehensive picture of the ongoing as well as expected future impacts of heat-trapping pollution on the climate experienced by Americans, region by region and sector by sector," said John P. Holdren, assistant to the president for Science and Technology and director of the White House Office of Science and Technology Policy. "It tells us why remedial action is needed sooner rather than later, as well as showing why that action must include both global emissions reductions to reduce the extent of climate change and local adaptation measures to reduce the damage from the changes that are no longer avoidable."

The report, which confirms previous evidence that global temperature increases in recent decades have been primarily human-induced, incorporates the latest information on rising temperatures and sea levels; increases in extreme weather events; and other climate-related phenomena. Adding greatly to its practical value in the realm of policy and planning, it is the first such report in almost a decade to break out those impacts by U.S. region and economic sector, and the first to do so in such great detail.

"This report stresses that climate change has immediate and local impacts - it literally affects people in their backyards," said Jane Lubchenco, under secretary of commerce for oceans and atmosphere and administrator of the National Oceanic and Atmospheric Administration. "In keeping with our goals, the information in it is accessible and useful to everyone from city planners and national legislators to citizens who want to better understand what climate change means to them. This is an issue that clearly affects everyone."

The 190-page report, produced under NOAA's leadership, is written in plain language to better inform members of the public and policymakers. It underwent intensive review by scientists inside and outside of government and includes information more recent than that incorporated into the last major report on global climate change released by the Intergovernmental Panel on Climate Change.

The study finds that Americans are already being affected by climate change through extreme weather, drought and wildfire trends and details how the nation's transportation, agriculture, health, water and energy sectors will be affected in the future.

The study also finds that the current trend in the emission of greenhouse gas pollution is significantly above the worst-case scenario that this and other reports have considered.

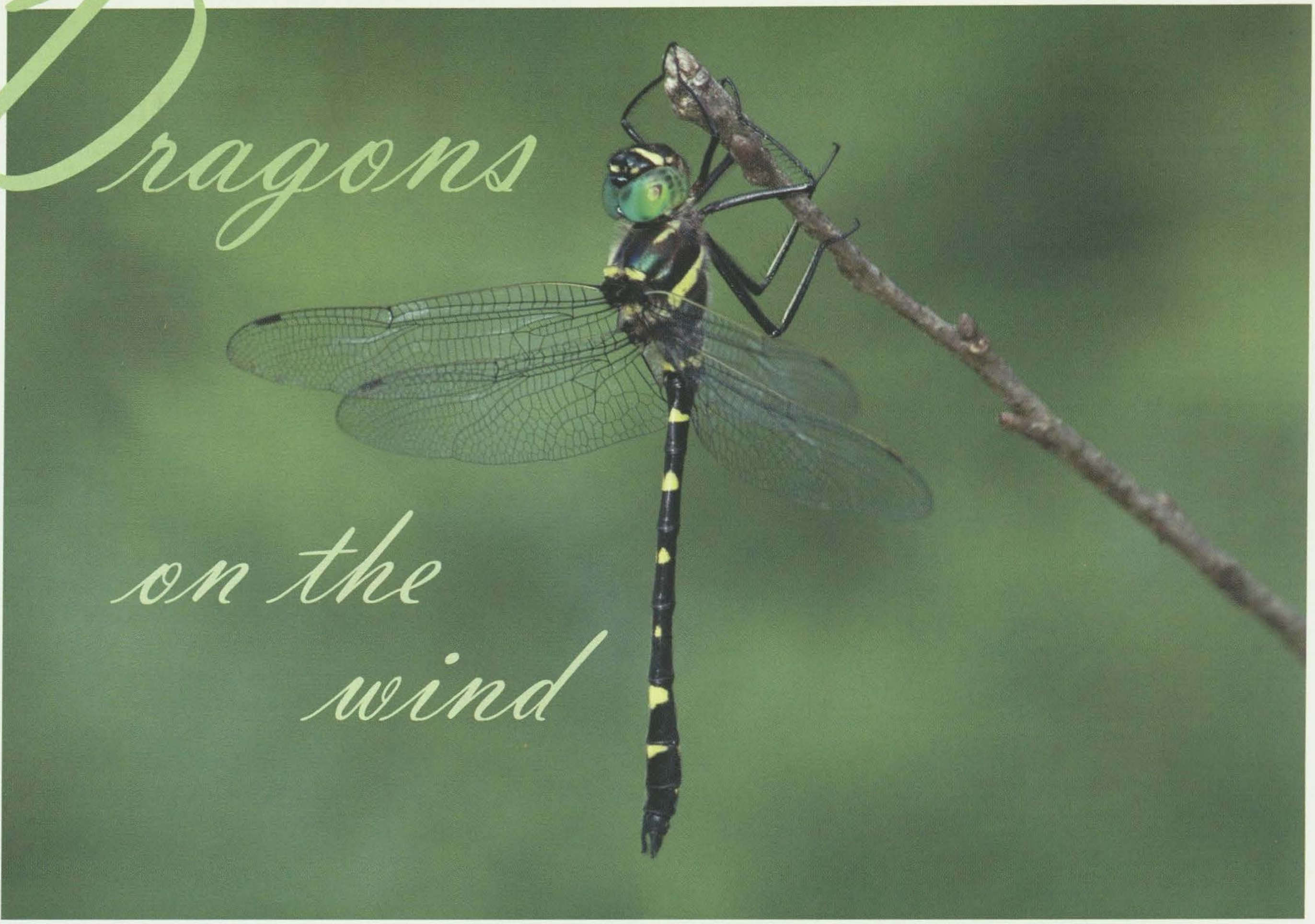
Among the main findings:

- Heat waves will become more frequent and intense, increasing threats to human health and quality of life. Extreme heat will also affect transportation and energy systems and crop and livestock production.
- Increased heavy downpours will lead to more flooding, waterborne diseases, negative effects on agriculture, and disruptions to energy, water, and transportation systems.
- Reduced summer runoff and increasing water demands will create greater competition for water supplies in some regions, especially in the West.
- Rising water temperatures and ocean acidification threaten coral reefs and the rich ecosystems they support. These and other climate-related impacts on coastal and marine ecosystems will have major implications for tourism and fisheries.
- Insect infestations and wildfires are already increasing and are projected to increase further in a warming climate.
- Local sea-level rise of more than three feet on top of storm surges will increasingly threaten homes and other coastal infrastructure. Coastal flooding will become more frequent and severe, and coastal land will increasingly be lost to the rising seas.

Responses to climate change fall into two categories. The first involves "mitigation" measures to limit climate change by reducing emissions of heat-trapping pollution or increasing their removal from the atmosphere. The second involves "adaptation" measures to improve our ability to cope with or avoid harmful impacts, and take advantage of beneficial ones.

The report is available for download online at www.globalchange.gov.

Dragons on the wind



GIFF BEATON

By Don Stillwaugh

When you hear the term "predator," you might think of panthers or bears or hawks or snakes. But some of the most fascinating, agile and formidable predators are flying insects – in particular dragonflies and their smaller cousins, damselflies. While the dragonfly ancestors patrolling Paleozoic swamps had wingspans well over 2 feet, the largest modern dragonflies navigate on wings spanning just over 6 inches.

Dragonflies and damselflies, collectively called "odonates," belong to a group of insects called the *Odonata* which means "toothed ones" in reference to the strong teeth on their mandibles (jaws). Dragonflies are larger, stronger flyers. Their heads are rounded, with enormous compound eyes composed of some 30,000 lenses giving them almost 360 degree vision, and therefore, great awareness. Their eyes usually touch on top of the head, and the wings are unequal with the hindwing being much broader at the base. Dragonflies at rest typically hold their wings straight out to the sides or sometimes cocked slightly downward and forward. They come in a host of colors from the purple skimmer to the mocha emerald to the cinnamon shadowdragon, and in many species, the males and females differ in color and markings.

Damselflies tend to be smaller, weaker flyers with eyes distinctly separated on the head.

Above: *A Georgia River cruiser.*
Facing page, top: *Damselflies like this ebony jewelwing have wings narrower at the base which are usually held together above the body while at rest.*
Bottom: *Dragonflies such as this male Needham's skimmer are larger, and typically hold their wings straight out to the sides or sometimes cocked slightly downward and forward when at rest.*

Their wings are narrowed at the base and are typically held together above the body when at rest. They, too, are very colorful animals.

There are approximately 5,600 known species of dragonflies and damselflies worldwide. Florida is home to about 120 dragonfly species and nearly 50 damselflies.

The darners are named for their long slender abdomens which resemble darning needles (it was said that the Devil used these insects to sew shut the lips of liars). Other groups include the river cruisers, petaltails, spiketails, clubtails, shadowdragons, skimmers, pennants, gliders and emeralds. Florida dragonflies range in body length from the 4-inch regal darner to the 1-inch (or less) eastern amberwing. Damselflies in Florida measure from less than an inch to just over 2 inches.

Some dragonflies, like the eastern pondhawk and the blue dasher, can be found almost anywhere, as they occupy a wide variety of habitats. Other species are more closely tied to particular habitats such as shady creeks, coastal marshes or sandy-bottomed lakes. Odonates have been used for decades as biological indicators of water quality because of this habitat specificity and intolerance of chemical, temperature and acidity changes in their environment. Many species have become much less common because of habitat loss and pollution. On the other hand, many tropical species are increasing in Florida, apparently from the effects of global warming.

All odonates are tied to aquatic environments through their reproductive cycle. Their mating is unique, as the male uses claspers on the tip of his abdomen to grasp the female behind the head. Pairs are often seen flying in this "tandem" fashion. The female then reaches

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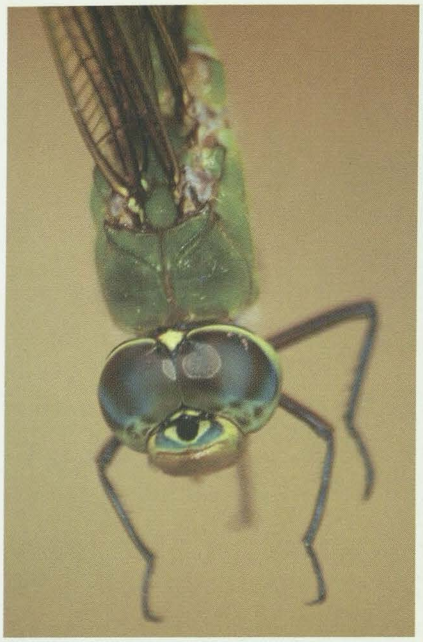
DENNIS PAULSON



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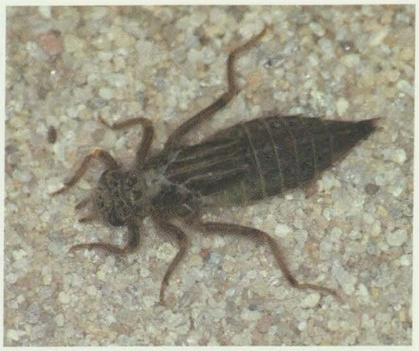
Above: *Dragonflies have enormous compound eyes with 30,000 lenses. The eyes usually touch on top of their rounded heads, as this common green darner illustrates.* ***Top, right:*** *Odonate nymphs such as this lancet clubtail may spend weeks to years in that stage before climbing out of the water for their final molt and emerging as immature adults.* ***Below:*** *Odonates, unlike other four-winged insects, are able to beat their fore and hind wing pairs independently or synchronously, which enables them to hover, fly backwards and make extremely tight turns. A red saddlebags rests before flying away.* ***Facing page, top:*** *A female seaside dragonlet.* ***Bottom:*** *A male roseate skimmer.*

forward with her abdomen to receive his sperm packet. This pose is known as the "wheel position," a reference to the shape formed by the two slender arching bodies.

Eggs are usually laid either directly in the water or on submerged vegetation. Tiny aquatic larvae called nymphs emerge from the eggs. Depending upon the species, nymphs may spend a few weeks to several years in this stage, molting many times as they increase in size. Dragonfly nymphs breathe through gills and can move rapidly by forcefully expelling water – a form of jet propulsion. Odonate nymphs are voracious predators of insects, snails, tadpoles and even small fish. Ultimately, nymphs climb out of the water for their final molt, emerging as weak-flying immature adults and leaving their cast skins for sharp-eyed naturalists to find. The full-adult colors develop in a week or so as the insects attain reproductive maturity. Adults of most species live only a few weeks, but some species can live for many months.



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These aerial acrobats can reach top speeds of more than 30 mph. Most species capture prey on the wing using their spiny legs to form a basket. Dragonflies can consume many times their bodyweight in mosquitoes and are regarded as beneficial insects. Other prey includes flies, midges, moths, bees, butterflies and even other dragonflies. Conversely, odonates are preyed upon by the likes of swallow-tailed kites, purple martins, flycatchers, frogs and spiders. There is even a robberfly which specializes in catching and consuming eastern amberwings.

Dragonflies exhibit many fascinating behaviors. A few species migrate long distances seasonally much like many birds. In fact, there are observations of nighthawks and merlins migrating along with and preying upon dragonflies. Some Asian dragonflies may

GIFF BEATON

GIFF BEATON

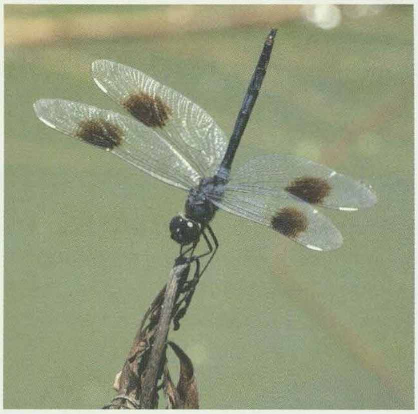
cover 1,000 miles or more in a seasonal migration between India and Africa. The best-known American long distance flyer is the common green darner. Sometimes large aggregations of this species, numbering in the thousands, form around the edges of large bodies of water. One swarm in the fall of 1978 was estimated to contain more than 1.2 million individuals.

Other behaviors that make dragonfly-watching fun include perching, patrolling, territoriality and "obelisking" – a perching posture where the abdomen sticks straight up. It is thought that this particular posture is used on very hot days to prevent overheating by reducing the amount of body area exposed to the hot sun. Your yard can become dragonfly-friendly if you place a few shrubs and small trees near a fish-free water garden. Reducing the use of pesticides and fertilizers also will help to provide a backyard environment from which to enjoy these fascinating creatures. FW

GIFF BEATON

Odonates Web sites and societies

www.odonatacentral.org
www.iodonata.net
www.pugetsound.edu/x5666.xml
www.giffbeaton.com/dragonflies.htm
www.npwrc.usgs.gov/resource/distr/insects/dfly/index.htm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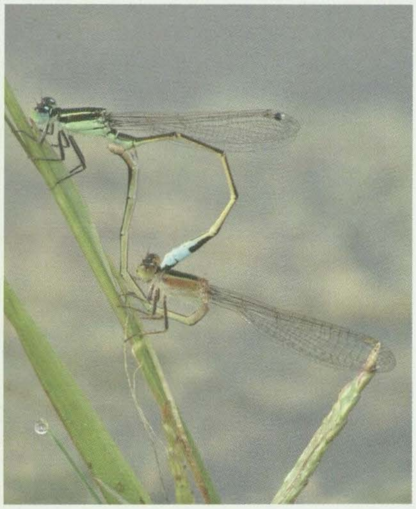
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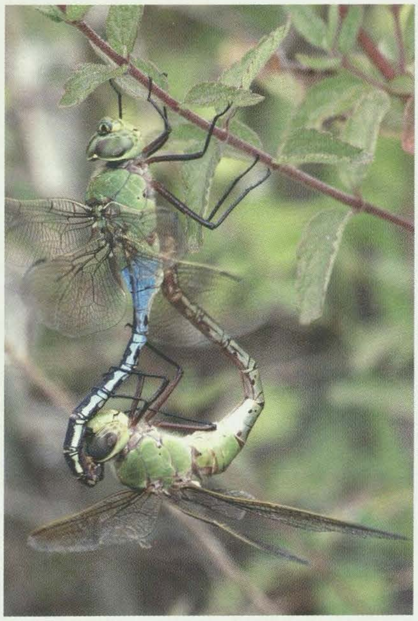
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Above, from top: *A male four-spotted pennant "obelisks;" a male Rambur's forktail uses claspers on the tip of his abdomen to grasp the female behind her head; a pair of common green darners in the "wheel position" as the female reaches forward with her abdomen to receive his sperm packet.*

Field **Notes**

Florida Fish and Wildlife Conservation Commission sworn personnel are fully constituted police officers with the authority to enforce all laws of the state, not just those relating to resource conservation.

Capsized

Officers Hal Webb and Arnie McMillion were notified of a capsized kayak several hundred yards south of St. Joe Beach with a kayaker in the water. Sea conditions were rough, placing the man in danger. Through contact with his family, the officers were able to pinpoint the location of the distressed boater. As they approached the man, he was clinging to his kayak while waving his paddle in the air. Officer Webb positioned his patrol boat next to the man and hoisted him to safety. The kayaker was exhausted and grateful for his rescue. He was not wearing a life jacket and the officers explained to him the importance of having one. He was taken back to shore and reunited with his family.

Hooked

Officer Kenneth Manning received a complaint that a fisherman intentionally hooked a diver. Reportedly, a dive boat arrived at a Russian freighter wreck site to dive after a fishing boat was already at anchor. This angered the fisherman, and when two of the divers surfaced near his boat, he threw a jig at them twice. On the second cast, the fisherman caught the diver's wet suit and ripped the suit's arm. Officer Manning interviewed and took statements from all the individuals. The fisherman who threw the jig stated he was letting the divers know they were on his spot and was not trying to hurt them. Charges are pending.

FWC officers credited with saving woman's life

A 52-year-old Charlotte County woman whose car plunged into a canal is alive today because of the skill, training and quick thinking of two FWC law enforcement officers.

It was FWC Officer Barry Shaw's first day on the job, when he and FWC Officer Sam Cohl were in their patrol vehicle at the Port Charlotte Beach Complex on Harbor Boulevard. Around 10 p.m., Aug. 22, they saw a small, silver vehicle heading in their direction. Suddenly, the vehicle stopped and made a fast U-turn into the boat trailer parking lot. The officers suspected the driver was trying to elude them and decided to investigate.

Officer Barry Shaw (above) and Officer Sam Cohl (below).

There was only one way in and out of the parking lot, but when the officers attempted to find the vehicle it looked as if it had disappeared without coming back out the same way it went in. Cohl and Shaw quickly checked the canal and found the car totally submerged. Shaw saw the taillights of the vehicle shining through the water.

Cohl immediately jumped into the canal and swam to the vehicle about 25 feet away. The car was resting on the bottom, 6 or 7 feet down. Meanwhile, Shaw called dispatch for assistance.

"It was extremely dark and difficult to see anything. I knew I didn't have much time," Cohl said.

Cohl tried the driver's side door; it was locked. He tried to tear off the sunroof. Finally, he discovered the driver's side window was partially open and managed to push it down a few more inches.

He then dove underwater and reached through the window, feeling around for a body. Suddenly, he felt an arm, and feeling no seatbelt, he gave one good tug and pulled the woman's seemingly lifeless body out the window and up to the surface.

He quickly swam the unconscious woman to the dock, and Shaw pulled her out of the water. The woman was not breathing and had no pulse.

The two officers began abdominal thrusts and CPR, and were able to revive her.

Emergency medical personnel arrived, and Cohl swam back to the sunken vehicle to make sure there were no passengers inside.

"All police work requires courage and dedication, but FWC officers have to have an extra measure of something on top of that," then-FWC law enforcement director Col. Julie Jones, said. "Like the best officers in any agency, they have a special instinct that kicks in when human life is at stake. It's called valor."

Cohl and Shaw are back on the job. Cohl is an 11-year veteran of the FWC and Officer Shaw – well, he had a very eventful first day as an FWC officer and looks forward to an exciting and challenging new career.

A broken ring

Officers Todd Nichols and Justin Allen were targeting illegal night hunting activities in a remote location when they saw people in a vehicle shining a light in a manner to disclose wildlife. The officers stopped the vehicle and found blood stains inside a toolbox, which prompted further investigation. With the assistance of Lt. Roy Williams, Investigator Larry Ayers, K-9 Officer Sam Dishman and Officer Travis Cooper, the officers discovered they had stumbled onto a poaching ring, which led to the discovery of numerous deer carcasses, two large 8-point buck heads, and 29 bags of freshly processed deer meat. The officers also obtained confessions from the suspects for the illegal taking of three alligators, one hen turkey and one cormorant.

Once bitten

Investigator Jim Smith and Officer Justin Henry responded to a report of an individual who had been bitten by an alligator. The victim claimed he did not know the alligator was present until he reached into an area he could not see. Investigator Smith and Officer Henry found evidence that the victim had been attempting to capture the 5-foot alligator to take home and eat. The subject was attacked when he grabbed the alligator by the tail. He was charged with attempting to illegally take an alligator. A nuisance trapper removed the alligator.

You should know

Officers Mike Albert and Erik Sullivan conducted a fisheries enforcement detail at the Coral Gables Waterway. While Officer Albert was in plain clothes, "blending in" with other anglers, the uniformed Officer Sullivan started to approach a man to check his catch. The man threw his fish in the water. He then became unruly and extremely vulgar when asked for identification. He stated that FWC officers had stopped him before (he had been issued a warning for a prior resource violation) and that "you should know" who he was. The man was handcuffed, but not before telling the officers he would not be taken to jail. The man was arrested for interference with an FWC officer, resisting arrest without violence and disorderly intoxication. At the jail, the subject threatened to kill the next FWC officer he encounters. He was also cited for littering.

Right place, right time

Lt. Mark Hollinhead was driving along I-10 when he came upon a serious single-vehicle accident. Apparently, a truck, in which a mother and child were riding, left the roadway and collided with a pine tree. The mother was ejected and the truck came to rest with the passenger side pinned against the tree. Lt. Hollinhead quickly provided his location to dispatch and requested emergency medical response. He then went to the passenger side, where he discovered a small child pinned. The child had severe head trauma, was unresponsive and not breathing. Lt. Hollinhead worked to free the child and performed CPR, with the help of a nurse who had stopped at the accident site, until medical emergency responders arrived on scene and took over. Both the child and mother were transported to a hospital.

Come on in

Lt. Kent Harvey received information about two American alligators being held captive in an apartment. He and Officer Matt Bell went to the apartment and spoke with the tenants who admitted they did indeed have two alligators inside the residence. Consent to search was given and the alligators were retrieved. The tenants, though, forgot to hide drugs and drug paraphernalia that were in plain view. The sheriff's vice unit was called and took over the narcotics investigation and charged the tenant accordingly. Officer Bell charged the tenant for illegal possession of alligators and the gators were returned to Lake Cascade.

Sharp eyes

Officer Jackey Angelis responded to a complaint regarding snook and redfish that were being kept in a tank inside a bait and tackle shop. While in the shop, a fugitive, who was wanted by the U.S. Marshals, entered the establishment. Officer Angelis recognized the subject as a wanted fugitive, stepped outside the business and alerted authorities to his location. He monitored the subject until deputies, U.S. Marshals and other law enforcement agencies arrived on the scene. The fugitive was secured without incident.

Too many redfish is major violation

A 20-year-old man and a 17-year-old juvenile male from St. Augustine are facing numerous saltwater-fishing charges, including a major violation for over-the-bag-limit of redfish. In the event of a conviction of a major violation, civil penalties apply in addition to criminal penalties.

Christopher L. Hobbs and the juvenile are charged with a combined 11 fishing-related violations, which include undersized redfish, sheepshead and black drum.

FWC FILES

FWC Officer Rich Wilcox and FWC Reserve Officer David Long display some of an illegal catch of mostly redfish.

The legal daily bag limit for redfish is one per person; Hobbs and the juvenile had 29.

"We had received information that a vessel matching the description of the one Hobbs was operating had been cast-netting for redfish, taking more than the legal limit and selling them locally," said FWC Law Enforcement Officer Rich Wilcox.

Redfish are not a commercial species, and it is illegal to sell them.

Catching the two subjects began when FWC Reserve Officer David Long saw Hobbs and the juvenile take a cooler off their fishing boat and put it near a waterfront residence. The two got back in the boat and drove it to a boat ramp, loaded it onto a trailer and drove away.

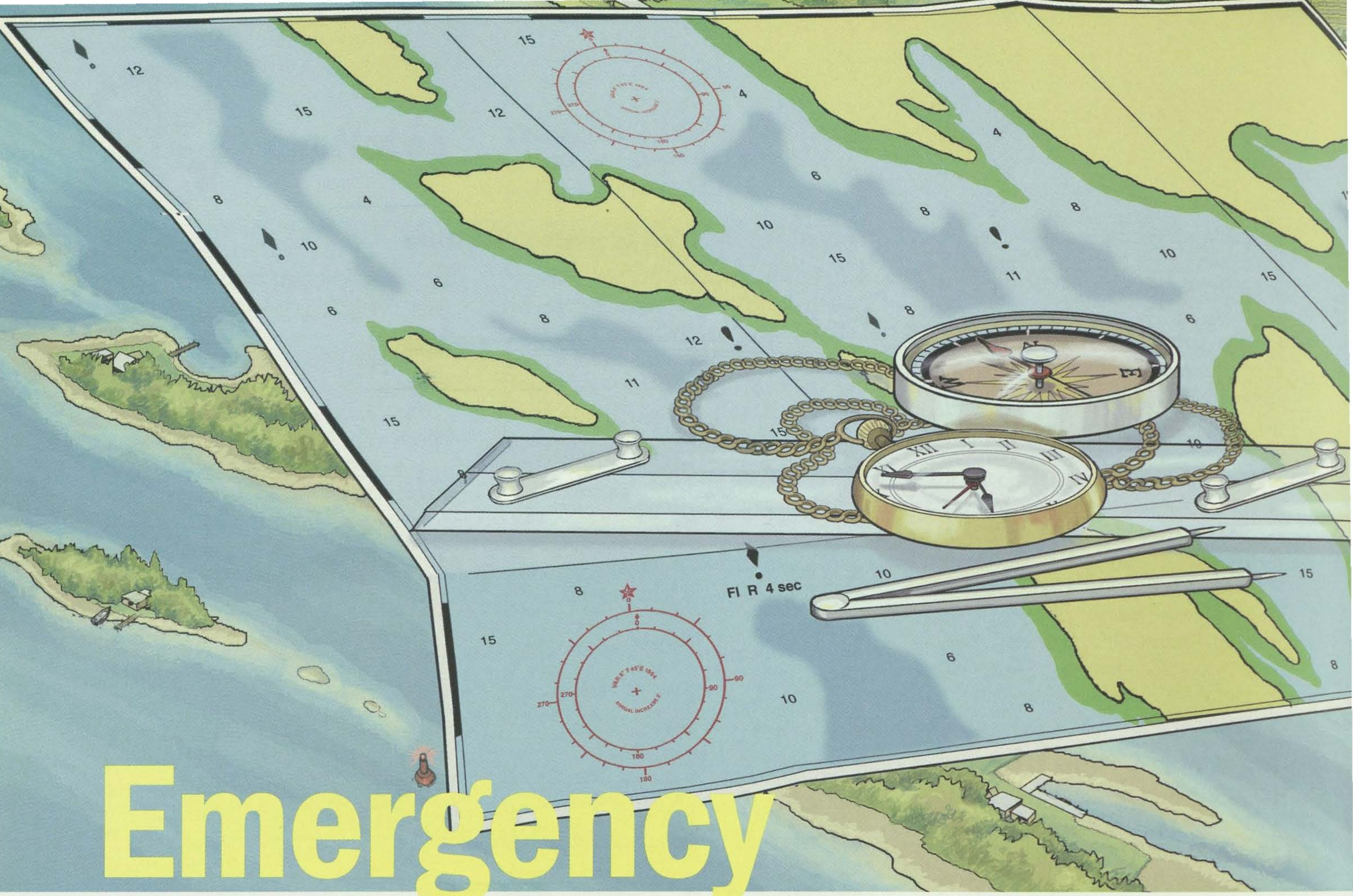
Officer Wilcox stopped the driver because one of the trailer's lights was out and the truck and boat matched the description of the reported rig.

An FWC investigator arrived at the traffic stop and asked Hobbs what was in the cooler he and the juvenile had dropped off. Hobbs said it was "illegal fish."

The officers and Hobbs returned to the cooler, and Hobbs unloaded 29 redfish, two sheepshead and four black drum. Hobbs said he and the juvenile caught the fish with a cast net and had intended to sell them.

After photographing the evidence, the officers donated the fresh fish to a local charitable organization.

If you think someone is breaking fish and wildlife laws, call the FWC's Wildlife Alert Hotline at 1-888-404-3922 or report it online at MyFWC.com/Law. You can select either option 24 hours a day, and you do not have to give your name. If your information leads to an arrest, you may be eligible for a reward.



Emergency navigation

By Henry Cordova ~ Illustrations by Fritz Seegers

Most boaters get around by piloting, the ancient art of finding your way by using landmarks. This can be as simple as simply looking around – the way you navigate around your house. Or, you can use a chart and compass and simple drafting tools to plot your position and course with some precision. With a timepiece and some means of roughly determining your speed, you can add dead reckoning to your navigation by making estimates when landmarks are scarce or hidden by weather or darkness. These simple skills served travelers well for centuries before GPS and other electronic aids helped us find our way.

But electronics are delicate and dependent on electricity. And worse than breaking down, they can give false readings which can land you in trouble. Even when working perfectly, if you lose confidence in them, they're worse than useless. Sailors as well as pilots have to learn to trust their instruments, but they are no excuse for not looking out the window. Even the normally dependable magnetic compass can fail, or get out of adjustment, or a gadget-addicted skipper may simply forget how to use it. The fundamental navigational question is not "What is my position?" It is "What course do I steer?" Human beings lack a natural sense of direction. Without electronics, or a compass or visible landmarks, even the most competent seaman can get hopelessly lost.

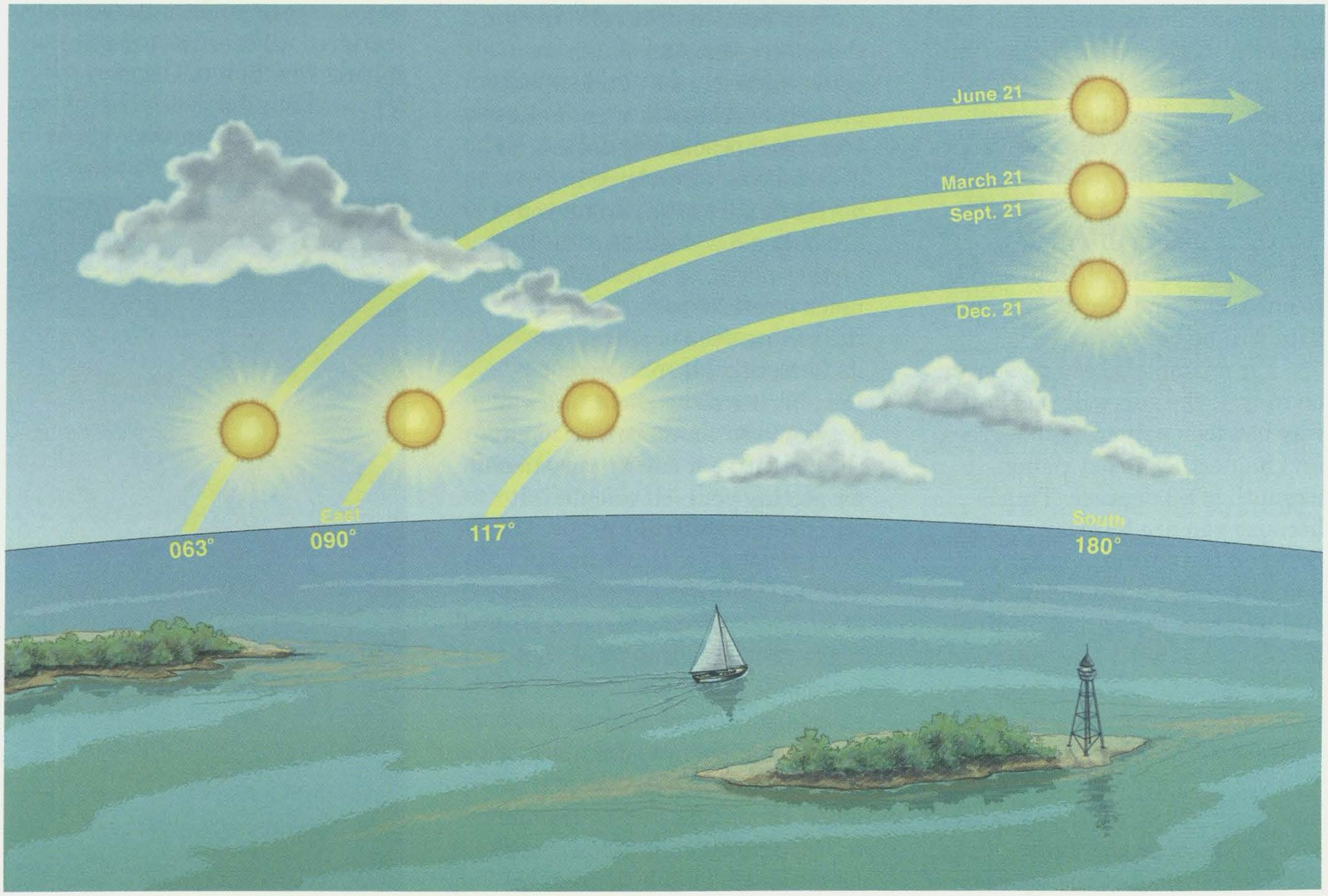
It is essential that a boater maintain situational awareness, that he instinctively knows where he is and which way he needs to go. Not only does this provide a constant check on his navigational methods and equipment, it also gives the confidence and self-assuredness that (along with caution) distinguishes the seaman from a weekend boater. When totally blind – either in a thick fog or out of sight of land – and when no other method or source of navigational data or estimate is available, the prudent thing to do is stop, drop the anchor if you can and conserve fuel. Otherwise, you will simply wander helplessly in circles until you are out of gas or far from home, or both. It is no disgrace to admit you are lost and to wait until the fog lifts, or the sun comes up or the stars come out – and they always will.

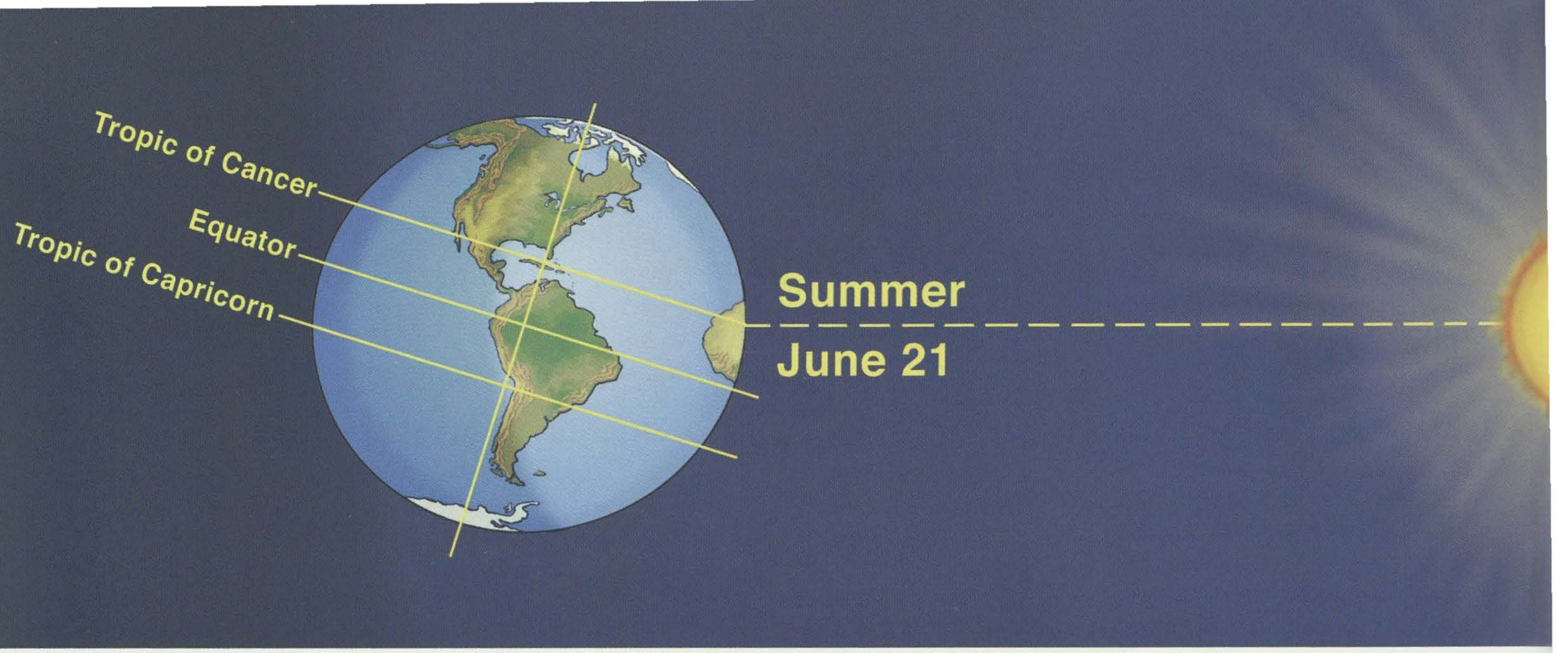
People were traveling long distances in boats for thousands of years before the compass was invented – sailors needed to know the sky. It isn't necessary to be an astronomer or celestial navigator or even to know the stars and constellations by name, but you should have a general idea of the layout of the heavens so that day or night, if it is clear, you can get a rough idea of direction. And you will learn that the better you get at it, the more fun boating will be, and the safer and more confident you'll become.

Seen from a point high above the north pole, the earth rotates counter-clockwise, from west to east. From any point on earth, sun and stars appear to rise in the east and set in the west. But this is somewhat misleading. The celestial bodies do rise in a rough easterly direction, travel all the way around the sky and set more or less in the west, but not precisely. It all depends what you're observing, the time of year and where you are on earth. It's like you are inside a giant black globe and the stars are painted on its inside surface. In fact, this is what our ancestors actually believed; they called it the celestial sphere, or the "firmament." Today, we know it's the earth that spins around once a day, but it's still helpful to think in terms of an imaginary sphere rotating around every 24 hours, half dark, half illuminated by the sun. The appearance of this sphere and its angle of spin to the horizon depends on where on earth you happen to be. And the motion of those lights pasted on the inside of the sphere will depend on where on the sky they are located.

Because Florida is fairly close to the equator, eyeball navigation by the stars is easy. However, the sun rises due east and sets due west only on the first day of spring and fall – the equinoxes – around March 21 and Sept. 21. It rises more and more to the north as spring turns slowly into summer, then stops its northern journey and heads back south around the summer solstice, on June 21, until it rises as far south as possible on the winter solstice,

__Below:__ The sun rises due east and sets due west only on the first day of spring and fall – the equinoxes – around March 21 and Sept. 21. It rises more to the north until around the summer solstice, June 21, and rises as far south as possible on the winter solstice, Dec. 21. __Facing page:__ Before the development of GPS, captains used a chart, compass and simple drafting tools to plot their position and course with some precision.





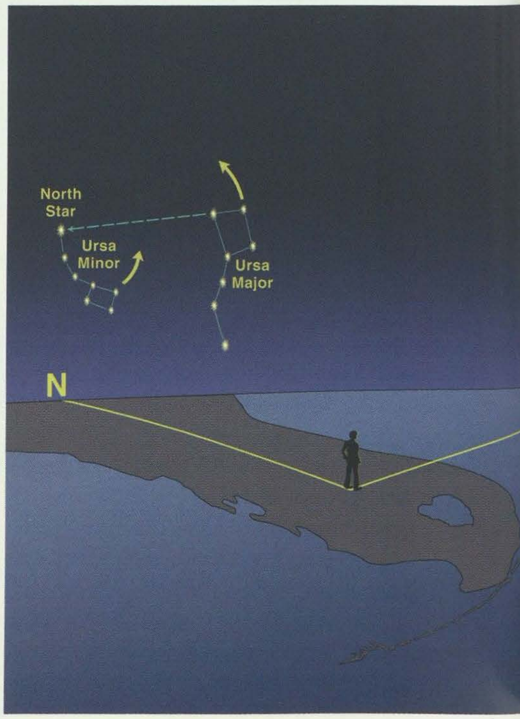
Dec. 21, when the cycle of seasons repeats itself. Because Florida is near the tropics, the sun never rises or sets more than about 27 degrees from due east or west. (All measurements in this article are rounded off.) So if we make a rough correction for the season, we can make a pretty good guesstimate of where the compass directions lie. Using azimuth angle to indicate compass direction, the azimuth increases clockwise from 0 at north through 360 degrees. In fact, we define the direction where the equinox sun rises above the horizon as the "east" (azimuth = 90 degrees). If we face east, "north" (azimuth 0) will be to our left, "south" (azimuth 180) will be to our right, and "west" (azimuth 270) will be behind us.

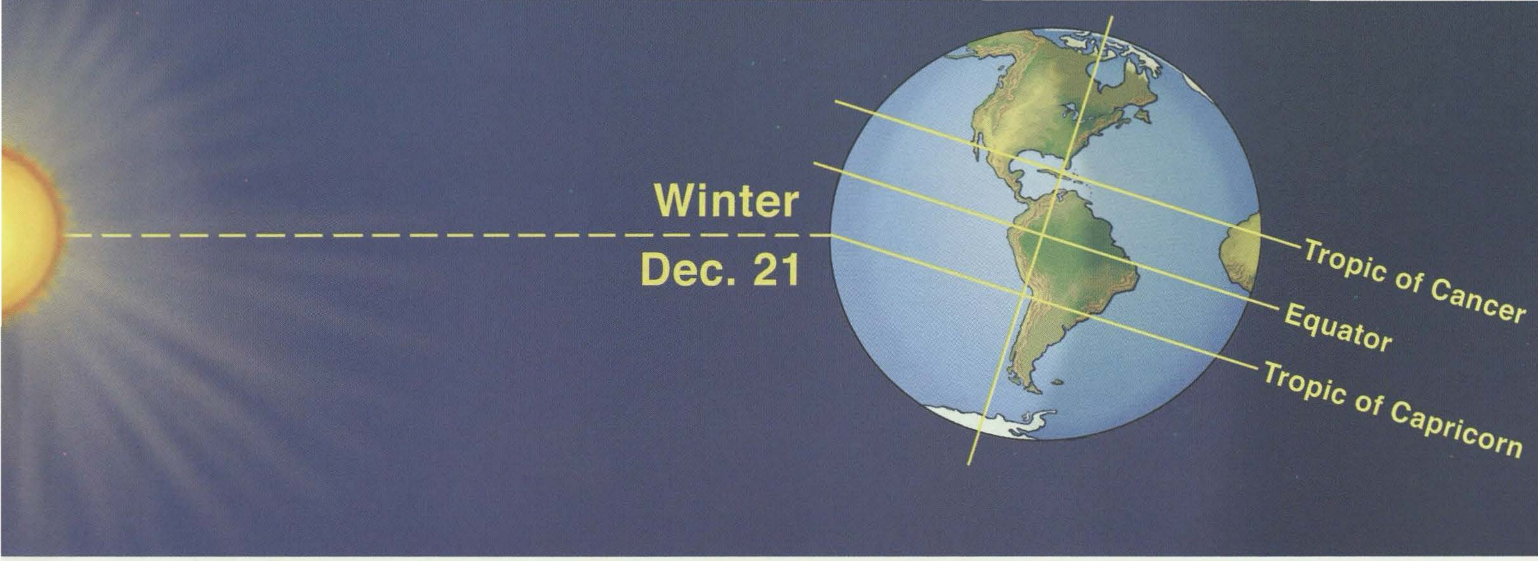
For example: if you go boating on May 1, the sun will rise half way between azimuth 90 degrees and its northernmost rising azimuth of 63 degrees. This is because you are halfway in time between the spring equinox and summer solstice. That day the sun will rise 13 degrees north of due east, and set 13 degrees north of due west, i.e. it rises at an azimuth of 77 degrees and sets at an azimuth of 283 degrees. This will vary slightly, depending on how far north or south in the state you are. Sunrise azimuth will vary between 90 at the equinoxes plus or minus 27 degrees at the solstices, so the solar azimuth will always be between 63 and 117 degrees at sunrise and between 297 and 243 degrees at sunset.

In Florida, the sun at noon will always be in the southern part of the sky, and that also can help you get oriented. At solar noon, the sun is due south of you and at its highest point, but you have to be careful in the subtropics. At its highest point, June 21, the sun is almost directly overhead at noon in Key West, and practically useless for determining directions. In the northern part of the state, you are only a few degrees of latitude farther north, so it doesn't help much either, especially from the rolling deck of a boat. At its lowest point, solar noon on Dec. 21, it will be about halfway between the southern horizon and the zenith, so it can be very useful for getting yourself oriented. It will be due south of you.

Except for a month or so around the direct overhead sun of summer solstice, you can still make good noontime direction estimates if you know the local standard times of sunrise and sunset and noon, and make allowances for them, but don't forget these times will vary due to Daylight Savings Time, your longitude and other factors. In other words, the sun is not at its highest point in the sky when your watch reads noon. Keep a copy of the day's newspaper with you on your boat (It comes in handy because it lists the tides, too.) Solar noon will be exactly halfway between the times of sunrise and sunset. At solar noon, the sun will be due south of you.

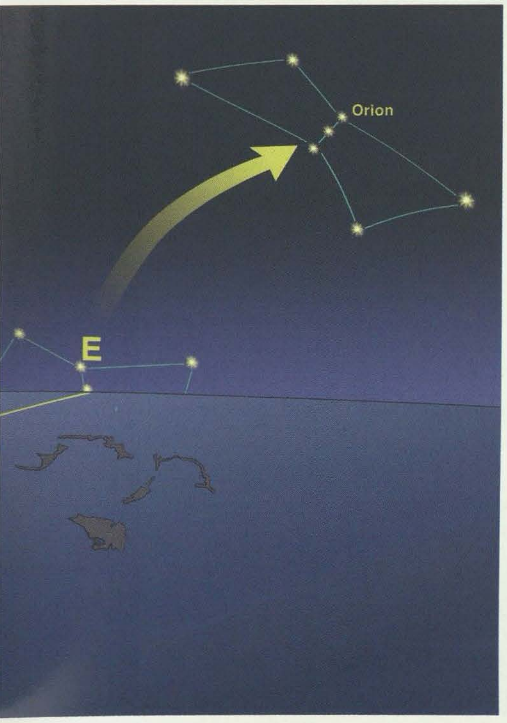
At night, you have no sun as a compass, and the stars are scattered all over the celestial sphere. The Belt of Orion, for those familiar with the constellations, is on the celestial equator and therefore always





rises due east and sets due west, just like the equinox sun, no corrections necessary. At its highest point in the sky, it is due south of us at an elevation of 60 to 65 degrees from the southern horizon, again, depending on how north or south you are along the Florida coast. Unfortunately, Orion's Belt is not visible throughout the year. It may be lost in the sun's glare or it may be below the horizon.

In general, you are going to have to use a different nighttime guide: the North Star, Polaris. Polaris is not directly over the North Pole, but it is close enough for eyeball navigation. As the celestial sphere rotates on its axis, Polaris does not rise and set; it is always in the same spot, unmoving, like a little tiny "N" drawn in the sky for the convenience of the navigator. If you look at Polaris, you are looking due north, and the whole sky is rotating counter-clockwise around it once every 24 hours. In the northern hemisphere, except for those stars and constellations close to the pole that appear to circle it all night, celestial objects generally rise in the eastern half of the sky, reach their highest point in the south, and set in the western half.



So how do you find Polaris amongst all those thousands of stars? Polaris will be second magnitude (easy to see but not really bright) at an elevation above the northern horizon equal to your latitude. In the Keys, it will be 25 degrees above it, in the Panhandle, 30 – in either case, about one third of the way from the horizon to the zenith. It is easy to find; there are no other bright stars near it. Look for Polaris every time you go out on a clear night when you know which way north is, memorize the stars and constellations near it like the Big and Little Dippers, but keep in mind they are always in motion so they will always look different throughout the year and the night. A book on astronomy, or a friend who is familiar with the sky, can help. Familiarize yourself with the northern sky so if you ever need to find north, you will instantly recognize it. Someday your life may depend on it. But even if it never comes to that, as you learn more, it will all start to make sense, and it will become easier, and you will want to learn more.

With just this basic knowledge of astronomy, you can never be totally helpless as long as you can see the sky. Even if you don't know where you are, you'll know which way to go. You will be oriented. You will not just be out on the water, you will be totally aware of your surroundings, an integral part of them, from the coasts and islands near you to the earth and your place on it, all the way out to the distant stars that guide you. You will be at the center of the universe, and you will know exactly how you relate to it. Take my word, there is no other feeling quite like it. FW

Left: *The Belt of Orion is on the celestial equator and always rises due east and sets due west, just like the equinox sun.* ***Above:*** *Because Florida is near the tropics, the sun never rises or sets more than about 27 degrees from due east or west.*

FWC **Update**

FWC concludes three-day meeting

The FWC wrapped up a three-day meeting Sept. 11 at Howey-in-the-Hills.

Commissioners approved conceptual changes to deer hunting zones and seasons. FWC biologists are recommending changes to align hunting dates with the timing of breeding activity, called the "rut." The FWC conducted public meetings in September to review possible changes and gather additional public input. The proposal would be up for final approval in February, if Commissioners direct FWC staff to proceed with developing it. Changes would begin with the 2010-2011 hunting season.

Commissioners also discussed conceptual changes to regulations concerning hunting, fishing, management areas, nuisance wildlife and nonnative wildlife.

The Sept. 9 session included a review of land acquisition and management issues.

On Sept. 10, the Commission amended its special activities license rules, reviewed and discussed issues regarding Northeast Florida weakfish and sand seatrout and Biscayne National Park's general and fishery management plans, and considered various federal fishery management issues.

Commissioners also directed staff to continue working with stakeholders to fine-tune improvements to Palm Beach County boating speed zones and heard a staff report on the agency's progress in complying with a new law that requires a pilot program to regulate the anchoring of non-live-aboard vessels outside of existing mooring fields.

The Sept. 11 session consisted of staff reports concerning the agency's finances, budget, legislative proposals and administrative matters.

The next FWC meeting will be in Clewiston, Dec. 9-10. FWC meetings are open to the public.

FWC honors brave officer, persistent scientist and talented artist

TIM DONOVAN

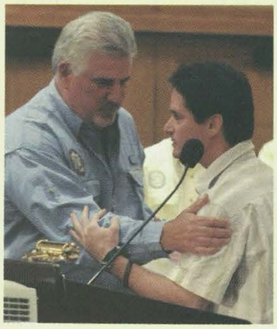
Commissioners and FWC Executive Director Ken Haddad (holding the award) recognize Dr. Karen Steidinger (center) for her many years of research and for receiving the 2008 Yasumoto Lifetime Achievement Award.

The FWC opened its meeting Sept. 9 by recognizing a wildlife artist, a scientist and an officer for their valuable contributions to conservation.

At the meeting in Howey-in-the-Hills, Commissioners signed a resolution honoring FWC Officer Vann Streety's courageous efforts the day he was shot multiple times in the line of duty. On July 15, Streety's skillful work eventually resulted in the incarceration of a "dangerous, armed individual who posed an extreme threat to human life," the resolution noted.

The resolution expressed the Commission's deep appreciation and admiration for the valuable service rendered by Streety, who is still recuperating from the wounds sustained while on routine patrol in Brevard County.

Streety was born in Leon County and graduated from Leon High School in 1984. The 42-year-old officer is married and has three children.



TIM DONOVAN

Commission Chairman Rodney Barreto thanks Officer Vann Streety for his service to the FWC.

Heroic efforts come in many forms. The FWC recognized Dr. Karen Steidinger of Parrish for doggedly researching harmful algal blooms – particularly red tide. In fact, the Florida red tide organism "*Karenia brevis*" is named after her.

She was recognized for receiving the 2008 Yasumoto Lifetime Achievement Award from the International Society for the Study of Harmful Algae. Through her work, she recognized that blooms possess multiple, sequential phases, which helped science understand the role that nutrients and environmental forces have on red tide development.

Although Steidinger retired in 2003, she continues to work with the staff of the FWC's Fish and Wildlife Research Institute in St. Petersburg.

Artists also further the cause of healthy wildlife and habitats. Orlando artist Bill Bishop's paintings, illustrations and sculptures of fish and his writings about fishing have informed and entertained those reading books, columns and magazines about his favorite pastimes – tarpon and fly-fishing.

TIM DONOVAN

Commissioners recognized artist Bill Bishop for his paintings, illustrations and sculptures of fish.

Under proposed rules, management plans will be put into place for all Florida-listed species, such as snail kites.

FILE PHOTO

Partners, public assist with imperiled species listing process

For nearly two years, the FWC has worked to draft rules that will offer the best possible conservation measures for Florida's imperiled species. Stakeholders and the public have played a vital role in crafting new rules.

At the FWC's September meeting in Howey-in-the-Hills, the Commission directed staff to continue to include the public and stakeholders in the process and to bring draft rules to the Commission at its December meeting.

"Staff has done a great job with crafting these rules," said John Sprague of Marine Industries Association of Florida. "But there are still a few issues that need to be worked out."

Dr. Elsa Haubold, the FWC's imperiled species team leader, provided an overview of the direction being taken in crafting the draft rules.

"The new draft rules will provide for a comprehensive and cohesive approach to managing species so they will thrive, rather than become extinct," Haubold said. "The draft rules focus on improving the management system and listing process for Florida's imperiled species."

Several speakers addressed the Commission commending the work staff has done and saying they are grateful they have been included in the process.

"I'm feeling optimistic," said Laurie Macdonald with Defenders of Wildlife. "I'm confident stakeholders and staff can come together with rules we can all live with."

Haubold outlined the draft rules' major changes to Florida's imperiled species listing process. All federally listed species would be on Florida's list. Previously, confusion occurred in understanding the difference between the federal list and Florida's list. Haubold stressed the efficiency of this process, which could stop duplicative permitting.

The list also would include a single category for state-listed species. The current process consists of three-tiered listing categories. The one-list concept simplifies the process, because attention will focus on the management of the imperiled species, instead of on the name of the imperiled species, Haubold said.

A scientific method will be used to review species-evaluation requests and avoid using subjective evaluations by staff. This scientific process will be used to determine which species will be evaluated for listing.

Finally, to ensure that no species ever comes close to extinction in Florida, management plans will be put in place for all Florida-listed species. Management plans, which provide conservation measures and actions to ensure species do not again become listed, are required for all species added to or removed from the list.

The process through which a species becomes listed will remain the same, and all of Florida's currently listed species will stay on Florida's single state list until management plans are created and a status review is conducted to determine if they should remain on the list.

DIANE ROME PEEBLES

FWC proposes Atlantic grouper and reef fish protections

The FWC proposed rules at the September meeting consistent with federal regulations to address overfishing of grouper in the Atlantic Ocean and help anglers protect Atlantic reef fish when they are released to the water.

Stock assessments indicate that Atlantic gag, red and black grouper are undergoing overfishing, which means that fishing pressure is too high to be sustainable. Measures were recently implemented in Atlantic federal waters (beyond three miles from shore) to reduce the harvest of these species. Nine other kinds of shallow-water groupers were also included in this action to reduce the incidental catch and discard mortality of gag, red and black grouper.

The federal rules:

- Decrease the aggregate daily recreational bag limit for all Atlantic grouper from five fish to three fish per person.
- Prohibit the captain and crew of for-hire vessels from retaining any species in the aggregate grouper bag limit.
- Allow anglers to keep no more than one gag or black grouper combined in the Atlantic.

In addition, the federal rules prohibit all harvest of shallow-water groupers (including gag, black grouper, red grouper, scamp, red hind, rock hind, coney, grasby, yellowfin grouper, yellowmouth grouper and tiger grouper) from Jan. 1 - April 30 in Atlantic waters. This spawning season closure applies to all recreational shallow-water grouper harvest and lengthens the previous two-month closure to commercial grouper fishing in the Atlantic.

The FWC is now proposing to apply the same regulations in Atlantic and Monroe County state waters to help speed the recovery and rebuilding process for Atlantic grouper and reduce the likelihood of harvest overruns and possible additional restrictions in federal waters.

The Commission is also proposing a federal consistency rule that would require dehooking tools to be aboard commercial and recreational vessels fishing for reef fish in Atlantic state waters. Dehooking tools are a proven way to limit the handling of fish and help increase the odds that fish will survive when they are released.

Final public hearings on the proposed rules will be held during the December FWC meeting in Clewiston.

FWC **Update**

Draft rule to allow peregrine falcons for falconry approved

The FWC moved one step closer to allowing falconers to take peregrine falcons for the sport of falconry.

At the meeting in Howey-in-the-Hills, the Commission directed staff to finalize the rule that authorizes the take of peregrine falcons for falconry with a permit issued by the FWC.

Seven speakers, including members of groups such as the Florida Falconry Association, North American Falconers Association, Florida Audubon of Florida, Defenders of Wildlife and Humane Society of the United States, provided input to the Commission on the draft rule. Those opposed to the falconry rule requested that the Commission find a way to fund a raptor-monitoring program that includes peregrines in the Keys.

The U.S. Fish and Wildlife Service released a plan for peregrine management for falconry in December 2008. The plan allows for 36 peregrine falcons to be taken for falconry anywhere east of the 100th meridian. This area includes states from Maine to Florida to Texas to North Dakota. Florida is eligible for a small portion of that number, which will be allocated among the states that allow harvest.

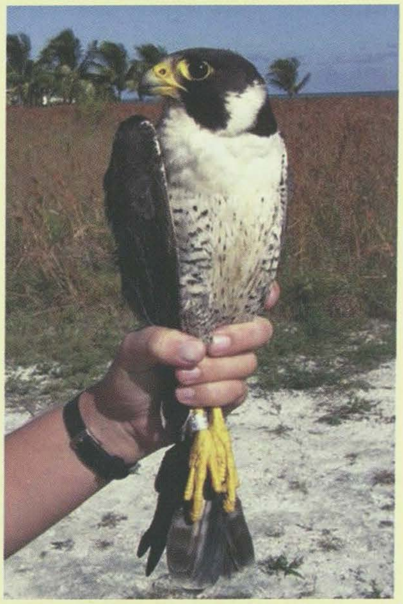
"Falconers contributed to the successful conservation of the peregrine by providing birds for captive breeding so peregrines could be reintroduced," said Robin Boughton, the FWC's avian coordinator. "Many falconers would now like the opportunity to again use the birds in the sport of falconry."

The peregrine is a highly valued bird by falconers for its 200 mph dives for prey. Falcons have been used by people for hunting for more than 1,000 years.

The USFWS took the peregrine off the endangered species list in 1999, and the FWC delisted the peregrine falcon in June, making it one of conservation's greatest success stories. Today, scientists estimate there are at least 3,100 breeding pairs in the United States.

The FWC met with stakeholders, including falconers and conservation groups, as the agency developed a management plan for the peregrine, which was approved in June. Staff has continued working with stakeholders as it drafted the rule to allow harvest of the peregrine for falconry.

Based on the allocations from 2009, Florida would most likely receive five or fewer permits for peregrines for falconry in 2010. Permit applicants would be randomly selected, with preference given to Florida residents.



FWC FILES

Commissioners directed staff to finalize a rule authorizing the take of peregrine falcons for falconry.

Peregrines migrate as much as 15,000 miles per year, and on average, 1,700 peregrines migrate through Florida, including the Keys, in the fall as they move between northern breeding grounds and wintering areas in Central and South America. Some peregrines stay the entire winter in the state, but they do not breed in Florida. They can be spotted in the fall and winter over open terrain, particularly near coastal shorelines and wetlands.

FWC acts to improve Atlantic vermilion snapper fishing

The FWC approved rules that are consistent with new federal regulations to reduce overfishing of vermilion snapper in the Atlantic Ocean and improve fishing for this popular species in the future.

The latest update on the status of vermilion snapper in the Atlantic concluded that fishing pressure is too high to be sustainable. Consequently, regulations reducing the harvest of vermilion snapper by around 50 percent were recently implemented in Atlantic federal waters, which extend beyond three nautical miles from shore.

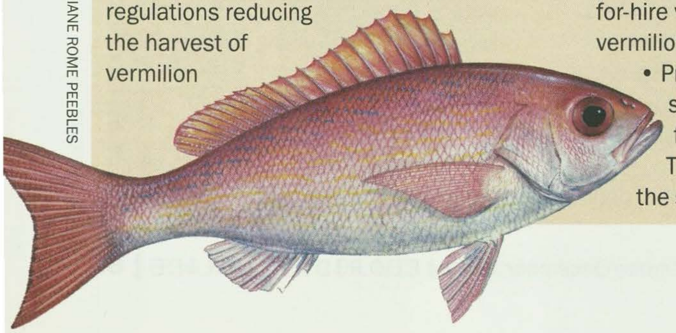
The federal regulations:

- Reduced the recreational bag limit for vermilion snapper in Atlantic waters from 10 fish to 5 fish daily per person.
- Prohibit the captain and crew of for-hire vessels from keeping Atlantic vermilion snapper.
- Prohibit all harvest of vermilion snapper in Atlantic waters from Nov. 1 – March 31.

The FWC decided to apply the same vermilion snapper regulations in Atlantic state waters (out to three nautical miles).

"Matching Florida's rules with federal regulations will help speed the recovery of vermilion snapper stocks in the Atlantic so we can continue to have a healthy abundance of this species for anglers to enjoy in the years to come," said FWC Chairman Rodney Barreto. "This action may also help prevent harvest overruns that could delay recovery of Atlantic vermilion stocks and result in even greater federal harvest restrictions in the future."

The FWC's new rules for vermilion snapper in Atlantic state waters took effect on Oct. 16.



DIANE ROME PEEBLES

FWC proposes more protection for sharks

DIANE ROME PEEBLES

The FWC proposed rules to enhance its long-standing policy to protect stressed shark populations in Florida waters.

Sharks have been strictly regulated in Florida since 1992 with a 1-fish-per-person/2-fish-per-vessel daily bag limit for all recreational and commercial harvesters, a prohibition on nearly two dozen overfished or rare shark species, and a ban on the cruel and wasteful practice of harvesting only shark fins, which is called finning.

The Commission is proposing to bolster these rules to further protect sharks in Florida waters and comply with recent management measures that have been implemented for sharks in coastal waters from Florida to Maine.

The FWC's proposed rules would prohibit harvest of sandbar, silky and Caribbean sharpnose sharks from state waters. Sandbar sharks are considered overfished and are experiencing overfishing, which means that fishing pressure is too high to be sustainable. Silky sharks are highly vulnerable to overexploitation, and Caribbean sharpnose sharks do not occur in waters off Florida, so adding this species will have no effect on harvesters in state waters.

The proposed rules also would establish a 54-inch fork length minimum size limit for all sharks except Atlantic sharpnose, blacknose, bonnethead, finetooth and blacktip sharks and smooth dogfish. This would help 14 species of sharks reach maturity before they are taken in Florida waters. The species, for which no size limit is required, are considered to be at healthy population levels or don't warrant a minimum-size limit.

In addition, the proposed rules would prohibit the removal of shark heads and tails at sea, allow only hook-and-line gear to harvest sharks, and make other technical shark rule changes.

The Commission also directed staff to work with stakeholders and develop options to possibly add other shark species to the prohibited list, especially lemon sharks, and to require the use of circle hooks to harvest sharks in state waters.

"Florida has controlled the harvest of sharks for nearly 20 years and is recognized as a pioneer and a leader in shark-management efforts," said FWC Chairman Rodney Barreto. "We are now proposing to add further protections to sharks to help ensure the sustainability of our marine ecosystem that relies, in part, on maintaining healthy shark populations."

A final public hearing on the proposed shark rules will be held during the December FWC meeting in Clewiston.

Quota hunters can bring a guest

FILE PHOTO

If you plan to hunt on a wildlife management area (WMA) this season, you should take note of a change the Florida Fish and Wildlife Conservation Commission made to its quota permit system. Hunters can now take a friend or family member on their quota hunt.

For every general gun, archery, muzzleloading gun, wild hog, mobility-impaired and spring turkey quota permit (excluding Blackwater WMA dog hunts and Holton Creek WMA mobility-impaired hunts), one no-cost, nontransferable guest permit may be obtained until the last day of the hunt at tax collectors' offices and other license agents. To take advantage of this, the guest must have a valid management area permit (unless exempt) as well as all other necessary permits and license required for the specific hunt.

2009-2010 guest permit worksheets are available for download at MyFWC.com/Hunting by clicking under "Limited Entry Hunts." Either the quota permit holder or the guest may fill out the worksheet and present it to any license agent.

The customer ID numbers for both the quota permit holder and guest are needed to fill out the worksheet, as well as the guest's date of birth and four-digit hunt number that identifies the specific hunt. The hunt number is not printed on most quota permits, but it is on the quota permit holder's quota hunt worksheet, which also is at the above Web address.

There are some stipulations to the guest permit, however. Both quota permit holder and guest must enter and exit the management area together, share the same vehicle and share a single person's bag limit. Also, the guest may hunt only when the quota permit holder is present on the area.

Additionally, on areas that have zone tags, the permit holder and guest must hunt in the same zone.

Once issued, a guest permit cannot be changed or given to another person for use, so it is recommended to wait until just before the hunt before obtaining it. All guests must have picture identification when using their guest permit, and lost permits may be replaced for $2 at any license agent.

FWC **Update**

Python control and legislation discussed by FWC

Pythons first appeared in South Florida nearly two decades ago, and they now take center stage as efforts to control their proliferation in the Everglades continue by wildlife managers at both the federal and state levels. The FWC continues to search for solutions for controlling the further invasion of this exotic species, as well as all reptiles of concern in Florida.

At the FWC meeting in Howey-in-the-Hills, staff presented an update on the reptile of concern programs to date, offered suggestions for further management measures, and discussed potential legislation that could possibly affect the management and enforcement of reptile of concern policies.

FWC FILES

In South Florida, Burmese pythons are found throughout Everglades National Park, Southern Glades Wildlife and Environmental Area and adjacent areas. Recently, pythons have been seen in Everglades Wildlife Management Area, and they have been found in Big Cypress National Preserve and Collier-Seminole State Park. Individual pythons have been reported in several cities around Florida.

After listening to approximately 20 speakers address the issues regarding Burmese pythons and reptiles of concern, the Commission approved a draft rule that codifies an Executive Order, effective Aug. 29, allowing hunters to take pythons in the course of hunting game species on four wildlife management areas in South Florida.

Commissioners directed staff to bring back a final rule at the December meeting in Clewiston.

They also asked Col. Julie Jones, the FWC's then-director of law enforcement, to open rulemaking and look at the science behind personal pet ownership and breeding and sale by Florida's reptile industry. Commissioners asked law enforcement to bring back a wide range of options, with complete flexibility, for the Commission to consider.

The Commission heard from the reptile industry and conservation groups before taking the vote.

"Let's find out everything we can about this problem," said Commissioner Ron Bergeron. "Then we can move forward diligently."

Tim Breault, the FWC's director of the Division of Habitat and Species Conservation, began the presentations by addressing the FWC's efforts thus far to control the spread of Burmese pythons in South Florida. He also spoke about the future of pythons in Florida.

"It's natural to have a spike in the population of a nonnative species, and I think right now we're seeing the explosive stage," Breault said. "As we continue to implement control measures, our large native species will figure out what to do eventually; I am hopeful once that happens that Florida's native wildlife will take control."

Jackie Fauls, the FWC's director of Legislative Affairs, provided the Commission an overview of the possible state legislation, including proposed bills by Sen. Lee Constantine, R-Altamonte Springs; Rep. Darren Soto, D-Orlando; and Rep. Ralph Poppell, R-Titusville, that would provide stricter licensing requirements and increase penalties and fines for violating licensing requirements and for releasing nonnative animals in the wild.

Sen. Eleanor Sobel, D-Hollywood, also proposes a ban on pet ownership of reptiles of concern.

Jones asked the Commission to allow staff to open rulemaking for reptiles of concern and other nonnatives to strengthen regulatory controls.

"Staff understands the python issue and wants to proactively develop solutions for the future," Jones said. "Pythons are a sign of a much bigger issue, and we want to apply all the new rules and regulations to all nonnative species in Florida."

Chairman Rodney Barreto said science and facts must guide decision-making on this issue as answers are sought for a solution.

"There's a huge battle cry for an all-out ban, but it is uncharacteristic of this agency to have knee-jerk reactions," Barreto said. "Let's put everything out on the table and encourage the industry to keep working with us to find the answers."

Florida's tropical rainforest

Article and photographs by John R. Sagert

The Fakahatchee Strand Preserve State Park, a true gem of the Florida state park system, is found in Copeland, just off U.S. 41 – better known as the Tamiami Trail. This 75,000-acre preserve does not host some activities such as camping, swimming and off-road vehicles, as its goal is to conserve the natural habitat of the area as much as possible. The preserve is home to abundant wildlife including wood storks, alligators, bald eagles, Florida black bears and Florida panthers.

North of Fakahatchee Strand Preserve State Park and north of I-75 is the Florida Panther National Wildlife Refuge. It is one of more than 540 national wildlife refuges administered by the U.S. Fish and Wildlife Service. There you'll find an education center that has information about the perils and habitat depletion Florida panthers face and the ongoing project to save the species. There are two hiking trails plus a wheelchair-accessible loop trail. Guided swamp walks are given on a limited basis.

Due east of the Fakahatchee Strand Preserve State Park and the Florida Panther National Wildlife Refuge is the Big Cypress National Preserve. I have been to the Big Cypress National Preserve/Fakahatchee area many times, but never on a guided hike. As a nature photographer and wanna-be orchid expert, I decided to sign

A twisted old cypress log served as the author's seat for lunch. It would be underwater in normal weather conditions, but the drought has revealed many hidden treasures.

Above: *A sign welcomes visitors to the entrance to the preserve off Janes Scenic Drive.*
Below: *An alligator suns itself on the edge of a small pond.*

up for a guided hike in the Fakahatchee. I arrived at the ranger station on a beautiful Saturday morning for the last spring hike of the year, where I met with other adventurous hikers. We were greeted by our guides, volunteers John Elting and Bill Mesce, who explained the swamp walk would be a dry walk because of the lack of rain for the past couple of years.

Elting explained that the Fakahatchee is the only bald cypress/royal palm forest in the world. He also mentioned that the Fakahatchee Strand is the only place in Florida with a subtropical and a tropical climate within the same preserve.

After going over safety precautions and providing hiking fees, we boarded an old WW II troop carrier for a trip to our starting point. We entered through gate K2, and walked on what once was an old railroad bed used to haul out large cypress logs. Today, these trails, more than 192 miles of them, are mostly overgrown, but a few are kept clear for hikers.

After a while, we left the trail for the dry swamp. Our guides were experts at pointing out the many species of trees and other plant life while explaining the life cycle of the preserve. We stopped at many trees that looked just like the ones I walk by everyday while photographing in the Florida swamps.

Then, a guide pointed out a small plant attached to a tree. It was a very small jingle bell orchid, one of only three leafless orchids in the preserve. The others are the ribbon orchid and the well-known but elusive ghost orchid.

The lack of water made this a relatively easy walk, but there were still a few muddy spots, plus many cypress knees and logs to

trip over. But at least they were not under water.

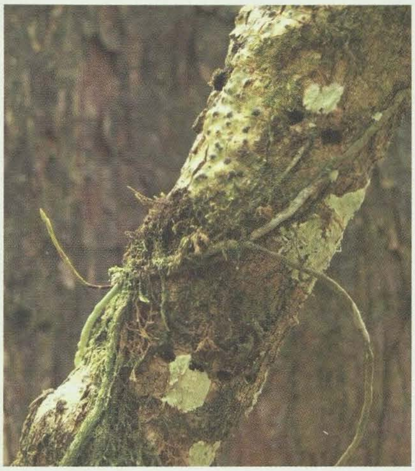
Another benefit we enjoyed was the lack of mosquitoes, although bug spray was required. After Bill and John pointed out more orchids and ferns, we stopped for lunch in a place they called the gator hole. I sat on an old cypress log with many twists and holes, that under normal conditions would have been under water. While eating an apple and some cookies, I couldn't help but notice how quiet and peaceful this place was. Except for a time when cypress logging was big business, this place has remained the same for hundreds of years. It's a magical place.

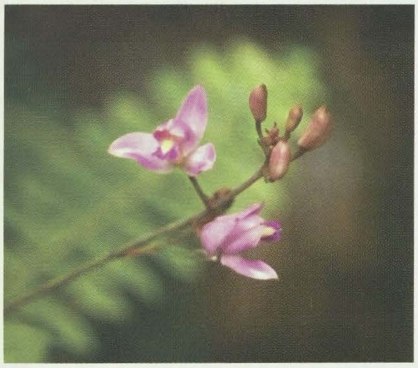
After leaving the gator hole, we did happen upon a gator lying on the bank of a small pool, enjoying the warm sun. We all took turns photographing it before continuing down the trail of seemingly endless orchids. Of the many orchid plants we saw, only two were in bloom. The pine pink orchid we found was growing on some stumps and fallen logs and was only waist high, making it easy to photograph. The other was the floridanum or dancing lady orchid. It was too high up on a tree to photograph.

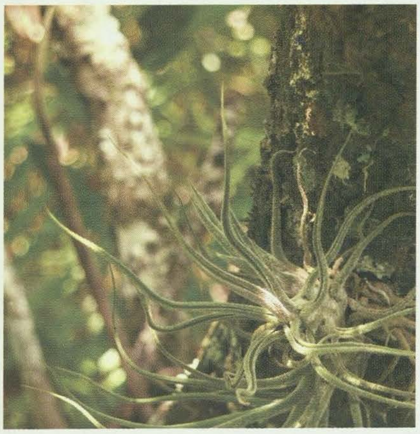
Some other orchids we saw included the dwarf butterfly orchid – which is very rare – the roller coaster orchid, the night scented orchid, the dingy orchid and many others I couldn't remember. I was amazed with the ease at which our guides were able to point out and identify all the plants we saw.

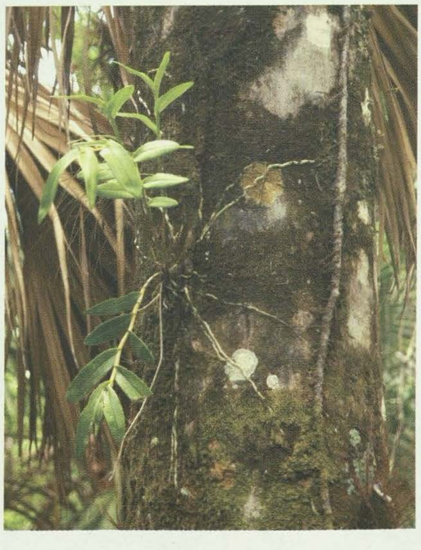
While it had been more than a year since John marked the trail, and it seemed like he got turned around a few times, we managed to come out on the road. After a short walk, we found the truck, and while talking about our adventure, we were treated to a doe and her fawn crossing the road 30 yards in front of us.

All of us except for one were from Florida, and we all vowed to return for another trip into the swamp when we could see more of the orchids in bloom. Our guides told us the best time is December and January. The five hours we spent in this magical place was well worth what we paid to lose ourselves in this tropical paradise. FW



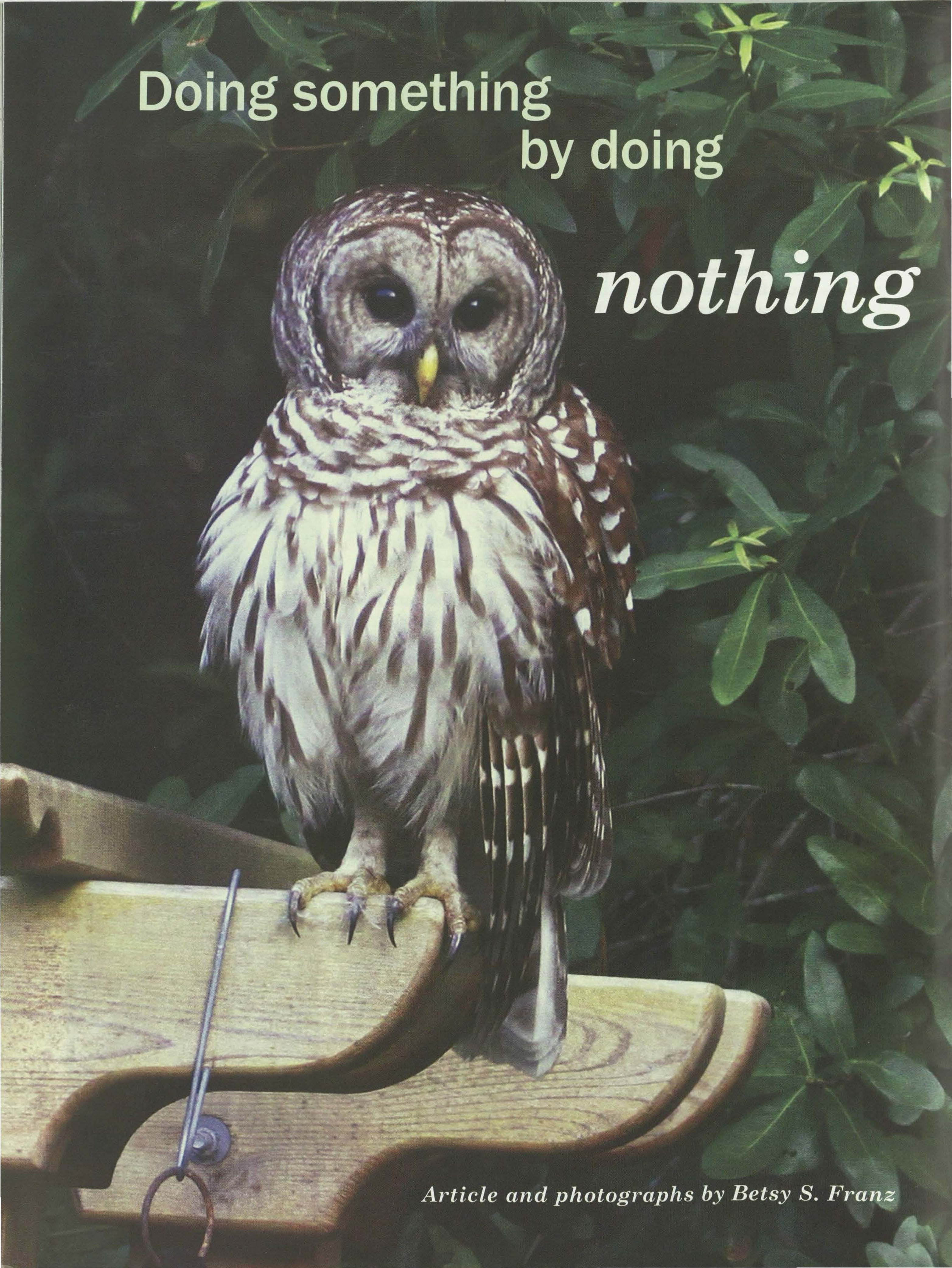






Above: *Volunteer guide Bill Mesce points out an orchid high up in a tree.* ***Right, top to bottom:*** *The root system of the famous ghost orchid. Our guides said the plant was about two months from blooming; the pine pink orchid was one of two varieties found in bloom; The fuzzy wassy fern is one of many varieties of ferns in the Fakahatchee Strand; the night scented orchid has a larger root system than many other orchids.*

Doing something by doing *nothing*



Article and photographs by Betsy S. Franz

We've lived on our beautiful little piece of wooded property for more than five years, and until today, I had never tried to count the number of trees on it. But today, for some reason, I wanted to be able to better quantify my surroundings. So early this morning, with notebook and pen in hand, I went outside and tried to count our trees. I was about a third of the way through the property and my list contained well over 100 trees when I gave up and decided it didn't really matter. For a two-acre piece of property that holds a 3,600-square-foot house and a few other man-made structures, we have a lot of trees.

When we built our home, we literally squeezed it onto the property, disturbing as little as possible. We don't have much variety in the species of our trees. A few types of oaks and pines make up the majority of the largest specimens, with a palm tree poking up among them here and there. But the spaces beneath the trees are covered with other natural growth – including saw palmettos, grapevines, beautyberries, sumacs, elderberries and other plants that provide food and shelter for wildlife. Our landscape consists of what was here when we built our home. We have added very little.

Because we left them alone, our trees aren't the scrawny little saplings that they would have been if we had clear-cut and replanted after we built our home. These are huge, towering oaks and pines, many of which have trunks far larger than I can wrap my arms around. Their upper branches spread out like green-gloved fingers splayed out against the sky.

We saved our trees not only for the wildlife, but for ourselves, as well. And on any given day, we are rewarded with a close-up view of an entire forest ecosystem occurring right outside our doors and windows.

Squirrels build nests and give birth in these trees. Countless, colorful birds fill the air with songs and twitters as they pass through on their migratory flights, stopping to rest or nest in the shady canopy. Lizards, snakes, tortoises, toads, rabbits, raccoons and other forms of wildlife wander around and through our small suburban forest.

The towering oaks are homes or shelters to almost all of these creatures, from the tiniest hummingbirds that sit out at the ends of barren branches to the large hawks and owls that nest in the well-concealed recesses of the treetops. And on the forest floor and in the bark and in the air, even tinier creatures exist – grubs and insects and spiders and even lichens and spores. The woods that surround us are alive, and at some level, they are constantly in motion. They aren't here because of anything we are doing. They are here because of what we aren't doing.

When some gardeners are out dousing their yard with chemicals and fertilizers that run off and harm the wildlife, we are lying in the hammock doing nothing. When they are running up huge bills

Two gopher tortoises (below) meander through the author's yard while a barred owl (left) stands sentry.

watering their wildlife-barren green lawns, we are watching tortoises and raccoons scamper through our undergrowth while we sit back and do nothing.

The plants in our yard are native to the property and are so acclimated to the local conditions they have no need for chemicals, fertilizers or extra water.

When others are spraying insecticides to stop unwanted six-legged visitors, we are watching dragonflies and birds perform aerial acrobatics while they keep the insect population in check. Our neighbors pick up every stray stick and every fallen leaf, but we let ours fall where they may, creating cover for critters and nutrients for the soil.

From the air, our property still looks much like the ancient oak forest that it once was – or at least a two-acre piece of the greater whole that was once here. We didn't create our forest. But by doing nothing, we did preserve it. And in this day of rapid development and rampant disregard for natural habitat, we take as much pride in the beauty of our woods as if we had created them ourselves.

My need to validate my do-nothing theory of environmental activism was quickly appeased today, as it is most days. My tree counting suddenly seemed silly and almost superfluous, as I turned a corner and saw a beautiful bobcat walking up our driveway. He didn't seem a bit concerned by my presence on his property. His reaction, too, was to just ignore me and do nothing.

In some parts of the country, a visiting bobcat might not stand out. But since we live in a very populous area of Florida in which even the huge old oak trees are a bit of a rarity, a visit from a bobcat is almost unheard of.

Our county has more than half a million residents. Less than two miles from our home, more than 43,000 vehicles rush back and forth on a major roadway each day. A little more than 60 miles away, space shuttles are launched.

But in our yard, we have created a sanctuary where the butterflies, the hummingbirds and even an occasional bobcat feel quite comfortable just hanging around watching us do nothing.

Since my childhood, I have been enthralled by the beauty of nature and wildlife. Although I can survive within the confines of four walls and a roof, I do not thrive unless I step outside. Nature is as much a part of my life as the blood that runs through my veins.

That is why it is so exciting to know that more and more residents of Florida are choosing to preserve or create wildlife-friendly landscapes.

The green building movement is encouraging some new homeowners. And programs such as the National Wildlife Federation Certified Wildlife Habitat program, are encouraging others. In fact, with more than 6,000 certified habitats, Florida recently became the state with the highest number of NWF-certified habitats in the country.

But perhaps I've encouraged a few people myself. My neighbors and other passersby often stop to notice the birds and butterflies and other critters that visit my yard. They ask me what my secret is – what special chemicals and methods do I use to attract so many wonders to my yard. And I always tell them the same thing. This piece of property is almost exactly the way that I found it. And the only thing that I can take credit for is for doing nothing. FW

Above: American beautyberry provides dinner for a black-throated blue warbler. ***Below:*** *A bobcat strolls up the author's driveway.* ***Facing page:*** *A red-bellied woodpecker feeds its fledgling; young squirrels explore a tree trunk.*

Wildlife **Watch**

JOHNNY VILLARONGA

STEVE HOWELL

BETSY FRANZ

Top to bottom: Red-bellied woodpecker; manatee; pair of barred owls.

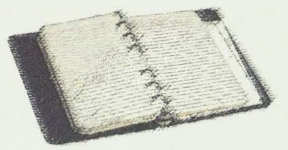
November

- Northern harriers can be observed gliding low over the marshes
- Ornate chorus frogs begin calling
- Greater sandhill cranes arrive to winter
- White pelicans begin migrating south to Florida
- Peak of deer rut in Central and North Florida
- Put out suet feeders for downy, hairy, red-bellied and red-headed woodpeckers
- Spectacular aerial courtship displays can be observed as bald eagles begin their nesting season
- Cypress trees begin turning rust color
- Florida manatees head south to warm water sites when temperatures drop; seasonal Manatee Speed Zones change on Florida's waterways
- Cedar waxwings, phoebes, robins and other northern songbirds arrive for the winter
- Watch for Florida black bears along the roads

December

- Nesting season begins for ospreys in South Florida
- Goldfinches plentiful in North Florida
- Listen for the courtship hooting of great horned and barred owls
- Snail kites in South Florida begin courtship
- Opossums breed now through mid-summer
- Increased number of belted kingfishers can be observed as winter migrants join resident populations
- December and January are the best months for watching waterfowl on wetlands, lakes and prairies
- Manatees congregate at natural springs and industrial warm water sites
- Right whales can be observed off the East Coast, north of Sebastian Inlet
- Bald eagles start hatching in North Florida

Event dates and locations subject to change. Contact sponsors for up-to-date information. Visit MyFWC.com for fishing and hunting seasons, dates and deadlines.



Calendar

December

Dec. 1: Medicinal Plant Walk. Chinsegut Nature Center; Brooksville; 352-754-6722; MyFWC.com/chinsegut.

Dec. 3-6: St. Petersburg Power and Sailboat Show. St. Petersburg; 1-800-940-7642; www.showmanagement.com.

Dec. 3-6: The Islamorada Sailfish Tournament. Islamorada; 305-852-2102; www.islamoradasailfishtournament.com.

Dec. 5: Sugar Cane Grindings. Dudley Farm Historic State Park; Newberry; 352-472-1142; www.floridastateparks.org.

Dec. 5: Map and Compass Class. Chinsegut Nature Center; Brooksville; 352-754-6722; MyFWC.com/chinsegut.

Dec. 5: Right Whale Festival. Sea Walk Pavilion; Jacksonville Beach; 727-369-6611; www.rightwhalefestival.org.

Dec. 9-10: FWC Commission Meeting. John Boy Auditorium; Clewiston; MyFWC.com.

Dec. 12: Seminole Hard Rock Winterfest Boat Parade. Ft. Lauderdale; 954-767-0686; www.winterfestparade.com.

Dec. 12: The Regatta of Lights. Matanzas Bay; St. Augustine; 904-824-9725; www.sayc2000.com.

Dec. 12: Early Winter Wildlife Tour. St. Marks National Wildlife Refuge; St. Marks; 850-925-6121; www.fws.gov/saintmarks.

Dec. 12: Introductory Archery Workshop. Chinsegut Nature Center; Brooksville; 352-754-6722; MyFWC.com/chinsegut.

Dec. 12: STA 5 Bird Watching Tour. Clewiston; 863-674-0695; MyFWC.com.

Dec. 13: Pompano Beach Holiday Boat Parade. Intracoastal Waterway; Pompano Beach; 954-941-2940; www.pompanobeachchamber.com.

Dec. 15: Lunch with Nature. Enchanted Forest Sanctuary; Titusville; 321-264-5105; www.titusville.org.

Dec. 18: Presents for Primates. Lowry Park Zoo; Tampa; 813-935-8552; www.lowryparkzoo.com.

Dec. 19: Holiday Cruise and Dinner. Edward Ball Wakulla Springs State Park; Wakulla Springs; 850-926-0700; www.floridastateparks.org.

Dec. 19: Wildlife Jeopardy. Ellie Schiller Homosassa Springs Wildlife State Park; Homosassa; 352-628-5343; www.floridastateparks.org.

Dec. 26: STA 5 Bird Watching Tour. Clewiston; 863-674-0695; MyFWC.com.

Dec. 26: Family in Nature Program. St. Marks National Wildlife Refuge; St. Marks; 850-925-6121; www.fws.gov/saintmarks.

January

Jan. 2: Get Green at the Zoo. Palm Beach Zoo; West Palm Beach; 561-863-7884; www.getgreentodayexpo.com.

Jan. 9: Wildlife Jeopardy. Ellie Schiller Homosassa Springs Wildlife State Park; 352-628-5343; www.floridastateparks.org.

Jan. 9: Winter Wildlife Tour. St. Marks National Wildlife Refuge; St. Marks; 850-925-6121; www.fws.gov/saintmarks.

Jan. 12: Winter Birding Hike. Chinsegut Nature Center; Brooksville; 352-754-6722; MyFWC.com/chinsegut.

Jan. 13-18: Everglades Birding Festival. Hollywood; 954-805-6810; www.birdadventure.com.

Jan. 15: Arbor Day Celebration. Francis Field; St. Augustine; 904-825-1004; www.getaway4florida.com.

Jan. 15-17: Key Largo Sailfin Challenge. Key Largo; 305-852-9337; www.fla-keys.com.

Jan. 15-31: South Florida Fair. West Palm Beach; 561-793-0333; www.southfloridafair.com.

Jan. 16: Florida Keys Seafood Festival. Bayview Park; Key West; 305-619-0039.

Jan. 21-24: Fellsmere Frog Leg Festival. Fellsmere; 772-571-0250; www.froglegfestival.com.

Jan. 22-25: Charlotte County Boat Show. Charlotte County Fairgrounds; 954-570-7785; www.fortmyersboatshow.com.

Jan. 23: Family in Nature Program. St. Marks National Wildlife Refuge; St. Marks; 850-925-6121; www.fws.gov/saintmarks.

Jan. 23-24: Blue Spring Manatee Festival. Orange City; 904-775-9224; www.themanateefestival.com.

Jan. 26: Lu, The Hippo's 50th Birthday. Ellie Schiller Homosassa Springs Wildlife State Park; Homosassa; 352-628-5343; www.floridastateparks.org.

Jan. 27-Feb. 1: Space Coast Birding and Wildlife Festival. Titusville; 321-269-5224; www.nbbd.com/fly.

Jan. 29: Creating Backyard Wildlife Habitat. Chinsegut Nature Center; Brooksville; 352-754-6722; MyFWC.com/chinsegut.

Jan. 29-31: Gator Knap-In. Stephen Foster Folk Culture Center State Park; White Springs; 386-397-7009; www.floridastateparks.org.

Jan. 30: STA 5 Bird Watching Tour. Clewiston; 863-674-0695; MyFWC.com.

Huntin' Follies

The snipe hunt

By Andy Sabol ~ Illustration by John Papesca

"No, I'm not kidding you. Would you like to go on a snipe hunt next Saturday?

Bill was sounding just a little ticked-off at me. But you have to understand.... the last time I had gone on a snipe hunt, the equipment included a gunny sack and a lantern!

Our plans were made; Saturday arrived, and we were driving just a few miles north of Dade City. We parked the truck and walked through a fairly clear stand of big oak, magnolia and hickory trees. We were headed to a small (50 acre) lake where the snipe were supposed to be waiting for us.

The trees opened suddenly, and we were standing on a small rise looking down at the lake. A recent drought had exposed a mud flat about 10 to 20 yards wide all around the lake and... there they were... snipe! Hundreds of them running all around down there, having breakfast in the mud.

We eased down the little hill, loaded our little 20-gauge pumps and headed for the snipe and action.

Well, those little buggers saw us coming, and the first little flock of them took off a good 50 yards ahead of us. They flew in a large circle out over the water and settled in on the mud about a 100 yards behind us.

I was about to discover that this was Bill's first real snipe hunt when he asked, "What are they doing?"

We continued to walk slowly along the dry edge of the mud flat towards the next larger flock. As soon as we got about 50 yards from them, they repeated the trick of the first flock. Up they went, like a bunch of miniature helicopters, out over the lake and around behind us, settling on the mud flat and then beginning to eat – just like the first flock. This little exercise was repeated about 10 more times as we completed our walk around the lake during the morning.

About halfway around the lake, Bill suggested we split up. The plan was that he would sit quietly, and I would continue to walk around the lake and flush those little buggers up. As they circled around behind me, Bill would be waiting for them.

Hah! They circled around allright – they landed about a 100 yards behind Bill!

We didn't get a shot all morning, but over the years we have had a lot of good laughs telling our "snipe-hunting" story. FW

Where do you answer the call of the wild?

Photo: Gus Holzer

FWC law enforcement is not a typical 9-to-5 job. Officers work day and night. Their ‘patrol’ vehicle may be an airboat or swamp buggy, and their ‘beat’ may be a swamp, forest or as far as 200 miles offshore.

Answer the call of the wild. If you want to help protect Florida’s natural resources and people – become an FWC law enforcement officer.

Call (866) FWC-HIRE (392-4473).

Florida Fish and Wildlife Conservation Commission
Division of Law Enforcement

MyFWC.com

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